

*In Jeffries's*

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D I S E A S E S  
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I N F A N T S A N D C H I L D R E N.

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(H. C. 18159 1854)

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## P R E F A C E.

**T**HOUGH a knowledge of the Diseases of Infants and Children be certainly of the greatest consequence in the practice of physic, yet it is to be regreted, that this department has not hitherto been cultivated with so much attention as the importance of the subject required. The difficulties arising from the inability of young children to describe their complaints, have no doubt greatly contributed to this neglect; as the indolence of some physicians, and the timidity of others, would naturally lead them either to decline

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or abandon an attempt, where the intricate nature of the enquiry, and the delicacy of the patients, promised so little success. On this account, the complaints of early life were long consigned to the management of old women and nurses; till Dr. Harris, proceeding upon the principles of a plausible theory, endeavoured to establish a more scientific method of cure. His observations, however, have been confined almost entirely to the acute diseases; and though Astruc and other later writers have in some measure supplied that defect, by a more extensive plan, yet they seem to have rather enlarged than elucidated this branch of practice: so that the subject appeared still to admit of being treated  
in

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in a more useful manner. Upon this presumption the following work was undertaken; in the execution of which, as I have all along endeavoured to be guided by fact and observation, I have not scrupled to avail myself of such assistance from the writings of others as I found to be confirmed by my own experience; and it seemed more consistent with the nature of the subject to aim at simplicity both in stile and method, rather than a more studied arrangement, or elegance of expression.

In following others, however, I have adopted only their most valuable remarks; avoiding their superfluous distinctions, and useless theories. If therefore the



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plan of this work shall appear more unexceptionable than that of any preceeding author, I flatter myself that its containing a greater number of diseases will likewise be considered as an additional advantage.

Those who are best acquainted with what has formerly been written on this subject, and are at the same time convinced of the utility of a more practical treatise on the diseases of children, will be the most disposed to shew their indulgence to the present undertaking; especially if they consider the difficulties with which it must naturally be attended. To the intelligent and candid, therefore, no farther



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farther apology is requisite, and to  
such only I submit the determina-  
tion of its merit; in the hope that  
it will meet with that favourable  
reception which is due at least to  
the intention wherewith it is offered  
to the public.

C O N T

THE [illegible] OF [illegible]

BY [illegible]

IN TWO VOLUMES

LONDON: [illegible]

18[illegible]

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ON



ON THE  
DISEASES  
OF  
INFANTS AND CHILDREN.

CHAP. I.

*Of vicious conformations, and injuries  
received in time of birth.*

SOME authors, who have been  
ambitious, as it would seem, of  
appearing very methodical, have pre-  
tended to assign distinct limits to infancy  
and childhood, as well as to distinguish  
the diseases peculiar to each. They  
have not always, however, agreed in  
B their

their opinions on either of these topics; a manifest indication, that such subtle distinctions are chiefly arbitrary and hypothetical, and more the result of fancy and speculation than a doctrine of nature. But infancy and childhood are so closely connected, that it is not easy to draw the line between them, or determine with any precision, where the one ends and the other begins; and their diseases, in general, are so much in common to both, that it would be equally difficult to separate them from each other, and reduce them into classes peculiar to either. Not to enter, therefore, into more minute observations on this subject, the diseases of infants and children shall be here treated promiscuously, without the least attempt to distinguish them by any special arrangements.

As some children are liable to disorders which commence with their very birth,

birth, in so far as they proceed from a vicious conformation of particular parts, or from injuries received in the time of delivery, these become naturally the first objects of our attention. It may be proper, therefore, to make some remarks on a few instances of this kind, before we proceed to those which are of a more general nature; especially as it is a subject which has been but seldom, or but slightly touched upon by practical writers.

## S E C T. I.

### *Of vicious conformations.*

THE conduits of the urine and stool are sometimes left imperforated, so that the contents of the bladder and bowels cannot be voided; and when an infant is so very unhappy as to labour under either of these imperfections, the case is truly deplorable, as on the one hand it must soon be destroyed for want of the natural discharges, while on the other, no salutary

means of relief can be attempted by art. All that can be done, in these cases, is, to make artificial openings, in order to supply the want of the natural passages; but these are but miserable resources. For such operations are always attended with difficulty and danger; and, even when they succeed the best, they can only eke out the thread of life a little longer, while they generally add to its former wretchedness. However, as it is pretty universally received as a maxim, that, in all dangerous cases, it is better to try a doubtful remedy than none, perhaps it might be thought wrong to omit them. The surgeons of the French academy have been very copious in their directions for assisting the operator on these occasions; but it will be sufficient here to mention a few of the most general only for the satisfaction of those who may not have seen their memoirs.

When



When the whole upper part of the *urethra* is impervious, the obstructed urine commonly forms something like a tumour at its lower extremity, near its connexion with the bladder; and at this place the opening ought to be made, with a lancet, or other proper instrument, for the evacuation of the water. But if no such swelling or distension of the parts appears, we are then desired to penetrate, with a trocar, into the body of the bladder itself, immediately above the *pubis*. It sometimes happens, however, that a new-born infant is unable to make its water, even though the *urethra* be in its natural state; in which case the impediment is commonly owing to weakness, or a quantity of mucus choaking up the passage. It is generally sufficient here, to hold the child's belly before the fire, or rub the parts with some gently stimulant applications; but if these methods do not

succeed in a reasonable time, it will then be necessary to introduce a very small probe or catheter, along the course of the canal, into the bladder, which will effectually remove the obstruction, and procure a discharge: yet this operation ought always to be carefully and tenderly performed, but especially in male subjects, in whom it is attended with most difficulty, on account of the greater length and straitness of their passage.

In like manner, when there is no perforation of the *rectum*, either through the whole or a part of its length, we are directed to open a passage with a bistory, along the course of the intestine, having a due regard to its particular situation and direction in the different sexes: an operation of a still more dismal nature, and more doubtful success, than any of the former. But if the *anus* only is imperforated, by means of a thin mem-

membrane covering the extremity of the *intestinum rectum*, the cure is more easy; and it is generally effected by dividing the membrane, where a darkish-coloured spot is commonly formed by the protrusion of the meconium.

To the head of vicious conformations likewise belongs what is commonly called the too great shortness of the *frænum linguae*, or bridle of the tongue, and the imperforation of the *Hymen* in females; both which imperfections have, sooner or later, their particular inconveniencies, though none of the dangers, so imminent in the preceding cases.

The *frænum* is said to be too short, when the membrane which forms it advances so far under the tongue as to reach almost to its tip; by which means it braces the organ so much down, as to prevent it from grasping the nipple,

and performing the action of sucking. This defect constitutes what is called tongue-tying; and besides the inconvenience just mentioned, if it is not corrected in time, it greatly affects the voice and manner of speaking afterwards. The cure, in this case, is so very simple and easy, that the midwife often does the whole business of her own accord, by dividing the ligament, while yet soft and tender, with the help of her nail alone. But if the *frænum* is too rigid to yield to this mode of operation at the birth, or if it has been so long neglected as to have acquired a considerable degree of firmness from time, it ought, in either of these cases, to be snipped with a pair of scissars; which can be easily performed, after first placing the child's head in a convenient situation, and raising up the tongue with the fore finger: though care must be taken, not to make the incision so deep as to wound  
any



any of the sublingual blood vessels, which would certainly be productive of very bad consequences. After the operation, the child's mouth may be washed with red wine, either plain, or mixed with water; or, in lieu of that, any emollient decoction, such as that of barley, with an addition of some honey of roses, or even common honey, may be used for the same purpose. The wound will soon heal, without any other application; but it will always be necessary to guard, as much as possible, against the coalition of the divided parts, as that would increase the disorder, by occasioning a greater contraction of the *frænum* than before, and it would be more difficult afterwards to cut through the hard cicatrix formed by such a reunion.

The *Hymen* is a semicircular folding or duplicature of the inner membrane of



the vagina, attached in such a manner to the posterior and lateral portions of that canal, at its lower extremity, as to fill up a considerable part of its orifice; but it is never found but in virgins, being always broke at the first intercourse with the other sex, when the lacerated fibres contract themselves into three or four separate portions, and form what are called the *glandula myrtiformes*. Sometimes, however, the entry of the vagina is entirely covered by a preternatural expansion of the *hymen*; and this circumstance, being unattended with any inconvenience during the earlier part of life, remains often unknown, till at length, when a riper age demands the evacuation of the menses, it is first discovered by the obstructions, and other bad symptoms it produces. To remedy this defect, nothing else is necessary than to divide the membrane with a lancet, sharp-pointed knife, or any other convenient

venient instrument; after which, a large tent, dipt in red wine, should be introduced, and secured with a proper compress and bandage, in order to keep the opening sufficiently dilated, as well as to prevent the lips of the incision from uniting. But it will be always prudent to enquire into the state of the *bymen* as soon as possible after birth, and then, when found necessary, to perform the operation: for there have been instances of some women, who, either from a too delicate modesty, or from a terror at the thoughts of manual operation, have refused to submit to inspection, and all other means of cure.

## S E C T. II.

*Of injuries received in time of birth.*

CONTUSIONS of the head and other parts, fractures, and dislocations, &c. are frequent consequences of laborious births; owing either to the degree of

compression sustained in lingering cases, when the head especially is too long retained in the *pelvis*, or to the violence that may be used in extracting the child.

When the head is much compressed in the birth, it is often squeezed into different shapes, according to the part that presents. Here, however, the midwife, or nurse, generally anticipates the directions of the physician, by practising the common methods for reducing it to a natural form; though sometimes, in proportion to the greater or less vigour of the child, the head will always retain more or less of the shape it received in the passage. At any rate, it should be wrapped pretty loose and easy, as in that way the bones of the *cranium* will have a better chance of recovering their natural situation; whereas, by attempting to confine it with too tight ligatures, that event might not only be prevented, but

but such an additional pressure might be made on the brain, as would, in all probability, endanger convulsions.

From the same cause, viz. long continued pressure, along with the obstructed circulation thereby produced, the integuments of the head are likewise apt to be much bruised, swelled, and inflamed; and till these symptoms are removed, or considerably abated, it will not be easy to make any effectual alteration in the wrong position of the bones. Warm fomentations of milk, or milk and water, are here often serviceable; but if these do not succeed, it will then be necessary to embrocate the parts with more stimulating applications, in order to assist the absorbent vessels to take up the extravasated fluids. A proper composition for this purpose may be obtained, from a combination of equal parts of camphorated spirits of wine and



and any mild expressed oil, such as that of sweet almonds; with adding, in the proportion of a dram, or somewhat more, of the compound spirit of lavender to an ounce of that mixture. If the tumor, however, should not yield to these remedies, and there is a tendency to suppuration, it ought by all means to be promoted; and afterwards, as soon as a fluctuation is perceived, an opening is to be made for discharging the matter, lest its longer retention should corrode the tender bones of the *cranium*. The cataplasms and subsequent dressings to be used on this occasion, are no ways different from those which are commonly employed in other similar intentions.

When other parts of the body are affected with the like injuries, they may be treated in the manner just now described for the contusions and tumefactions of the hairy scalp.

As



As the violent compressions of the head above mentioned are frequently followed by convulsions soon after delivery, it would be proper in all these cases, before the navel string is tied, to let it bleed two or three spoonfuls, more or less, according to the size and strength of the child. Nothing will contribute more to relieve the oppressed and overloaded brain, than a well-timed evacuation of this sort; and, by such a precaution alone, the disagreeable consequences just now spoken of will often be prevented. But if this has been neglected, and fits have actually come on, we must endeavour to make a revulsion by all the other means in our power; as by opening the jugular vein, procuring an immediate discharge of the urine and *meconium*, and applying small blisters to the back, legs, or behind the ears. The *semicupium*, too, would seem to be no improper remedy, in

in this case, by deriving the oppressive load of fluids from the head and upper parts:

It sometimes happens, after a tedious labour, that the child is so faint and weak, as to discover little or no signs of life. In such a case, after the usual cleansing, the body should be immediately wrapped in warm flannel, and briskly tossed and moved about in the nurse's arms, in order, if possible, to excite the languid circulation. If this fails, the breast and temples may be rubbed with brandy, or other spirits; or the child may be provoked to cry, by whipping, and other stimulating methods, as the application of onion, or salt and spirit of hartshorn, to the mouth and nostrils. But after all these expedients have been tried in vain, and the recovery of the child has been absolutely despaired of, it has sometimes been happily revived,  
by

by introducing a short catheter or blow-pipe into the mouth, and gently blowing air into the lungs at different intervals. Such children, however, are apt to continue weak and puny for a considerable while afterwards, so that it is sometimes no easy matter to rear them; and therefore, particular care and tenderness will be required in their management, that nothing may be omitted, which can contribute either to their preservation, or the improvement of their strength and vigour.

Among the various injuries which take their rise from laborious and preternatural cases, may likewise be reckoned dislocations and fractures, especially when considerable force has been used in the delivery. As soon, therefore, as the child is born, its body ought to be carefully examined, that, if any of these accidents has happened, the proper means

means of cure may be immediately pursued, according to the nature of the case; otherwise, the disorder may become too inveterate to admit of an effectual remedy, and consequently, besides greatly incommoding the unhappy infant in the mean time, by the pain and uneasiness it creates, it must infallibly lay the foundation of some helpless deformity for life. The bones of the arm and thigh are the most subject to fractures of any; and luxations are more incident to the shoulder, than any other part: wherefore, in making the search just now recommended, our attention should be principally directed to the condition of these several parts. It will not be necessary here, to describe the process of cure in these complaints of infants; as the reduction of the injured limbs, and the whole following treatment, is to be exactly the same as in similar cases of adults; only, making a proper allowance for the greater



greater tenderness of the subject, in regard to the degree of force that is used, &c.

When any of the bones, instead of being broke, are only a little bent, they can generally be reduced to their natural state, by slow, easy, and repeated extension; on account of the great softness and flexibility of their texture, at the time of birth, which makes them gradually yield to the most gentle impressions.



## C H A P. II.

*Of costiveness from the meconium, and its effects, and particularly the Red Gum.*

**W**E come now to treat of those disorders which are more incident to infants and children than to adults, either from the greater delicacy of their frame, which subjects them to injuries from slighter causes, or from some natural and necessary change produced in their habit by established laws, as the breeding of the teeth, &c. We shall begin with costiveness, as being one of the first inconveniencies to which they are commonly liable, and often productive of many other complaints.

If, soon after birth, the child has not been purged by the mother's milk, or some artificial substitute, it is apt to suffer much from the retention of the

*meconium*, or that viscid kind of excrement which has been gradually accumulated through the whole tract of the intestinal canal, but particularly the colon. Besides a considerable share of acrimony, which must render it extremely hurtful to the tender nerves of infants, this substance, by being so long pent up, acquires likewise so great a degree of hardness and tenacity that few new-born children have strength enough to discharge it. Its expulsion, therefore, ought carefully to be promoted by some means or other, endued both with a stimulant and dissolving power; otherwise the infant becomes soon affected with various complaints of the stomach, bowels, and other parts, which often terminate in dangerous and even fatal convulsions.

As most of the other symptoms which take their rise from the costiveness of  
the

the child in the beginning, as nausea, vomiting, and gripes, &c. are likewise frequently produced by a variety of other causes, and will be treated afterwards at large in their proper place. I shall here only take notice of a certain species of eruption, which is commonly called the *red gum*.

This appears in the form of little red spots, or pimples, all over the body, and may be considered as a peculiar effect of this particular cause, namely, the costiveness of the child from the retention of the *meconium*, in so far as it is seldom or never to be met with in those children whose bodies have been sufficiently opened at first, unless they are over-fed, kept too hot, or otherwise improperly treated. Women, in general, do not look upon this as a disease, but rather imagine it to be a natural circumstance, and attended with salutary effects. But, so far,

far, that is certainly a mistaken notion, as the eruption plainly shews a deprivation of the humours; though it must be granted, at the same time, that the discharge of the acrid matter upon the surface is a lucky incident, as by that means a great number of worse disorders may be prevented.

When the *gum* breaks out within the first month, which is generally the case if the child has not been allowed to suck its own mother, or if it has not been otherwise sufficiently purged in due time, it may be easily cured by the use of some gentle laxative, exhibited in such a manner as to procure three or four stools a day at the beginning, and continued for a longer or shorter time in that proportion, or diminished in quantity, according to its effects. Rhubarb, as it generally operates without violence or irritation, is the medicine chiefly employed



ployed in most disorders of children requiring a discharge of this kind; and the dose, in this case, may be from two to four grains, according to the strength of the child, and other circumstances. Notwithstanding its usual mildness, however, it is sometimes apt to occasion gripes; while, at other times, its ungrateful taste makes many infants so averse to it, that it is next thing to impossible to force it upon them in any form whatever. In either of these cases, its place may be supplied by the *pulvis jalapii*, which is entirely free from the latter inconvenience, as having no smell at all, and little or no taste; and if it is given in doses of two or three grains only, or thereabouts, and well triturated with some sugar or almonds, it will seldom or never excite any uneasiness in the bowels. Hoffman, indeed, warmly dissuades from the exhibition of jalap to children, and he mentions several instances



stances of its pernicious effects. But, with all due deference to that celebrated writer, he seems to have been deceived : for his objections to this medicine are not only overruled by the contrary testimony of other respectable authorities, but experience, the best guide in all matters of practice, likewise vouches for its innocence in those very cases, wherein he most condemns it. Manna is another useful article in this intention, and may be given, by degrees, in the quantity of a dram or two, dissolved in any weak broth, and repeated occasionally ; or equal parts of this and casia may be advantageously used, in like manner, for the same purpose. While the belly is kept open by one or other of these medicines, a warm bath of milk alone, or mixed with some water, will sometimes be very proper ; as, by relaxing the pores of the skin in this way, the inherent acrimony will be still more

freely solicited outwards, and consequently there will be less hazard of its falling on the vital parts.

When the child is much troubled with costiveness at a later period, as frequently happens, either from the binding quality of the milk, or any other cause, the same symptoms, as in the preceding case, are generally produced, as flatulence, pain, gripes, and convulsions, &c. Here, therefore, the same laxative medicines will be useful, together with emollient glysters, and a prudent administration of carminatives, or absorbents, according to the nature of the case; as will be more fully explained hereafter. One particular caution, however, may be offered in this place, and that is with respect to opiates. They are always prejudicial on these occasions, and never ought to be given unless the unsupportable violence of the pain,

pain, in some measure, justifies their use; nor, even in that case, are they by any means to be ventured on, till the belly has been first opened, by a purgative or a glyster.—But as much depends, at this time, on the properties of the milk, we must carry our views a little farther than the bare treatment of the infant. Hence therefore, the mother, if she suckles her own child, or otherwise the nurse, should be ordered such physic, and other medicines, as may seem best adapted to the nature of the symptoms; and their diet ought likewise to be regulated on the same principle. For a certain portion of whatever they take, is always communicated to the child through the secretion of the breasts, and consequently, according to its nature, it produces the same good or bad effects, as if it were given to the child itself. And hence it is, that very

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weakly

weakly children, who cannot take the proper remedies themselves, are so often recovered by medicating the milk, while others are no less frequently destroyed by the intemperance of their nurses.



## C H A P. III.

*Of Excoriations.*

**Y**OUNG children are often liable to these, especially behind the ears, in the neck, arm-pits, and groins, about the *pudenda*, and on the insides of the thighs. They proceed chiefly from the acrimony of the sweat, urine, and fœces, all which will quickly erode the cuticle, unless the child be kept clean and dry; and hence they are most common in fat and gross habits, because the larger and more numerous foldings of the skin in these will be more apt to lodge impurities. Nurses should therefore be instructed to be very careful in washing the parts frequently, and changing the cloths and linen as often as occasion requires; for if they could be prevailed upon to perform this easy and wholesome part of their duty with a more conscientious re-



gard than is very usual, children would seldom be troubled with these complaints, and it would be a means of preserving them from many others of a worse kind.

When the excoriations are only slight and superficial, they are rather an inconvenience than a disease, and require little else than being carefully washed several times a day with warm water, and afterwards covered with soft linen rags to prevent any further fretting of the parts by friction. But if the case has been neglected till it has become more considerable, and the child is restless and uneasy, it will then be proper to perform the necessary ablutions with some emollient decoction, instead of plain water, and to spread small portions of the *unguentum album* on the slips of linen: and besides, when there is a copious discharge of a corrosive humour

from

from the excoriated parts, it will likewise be necessary to sprinkle them, after every washing, with some calcined hartshorn, chalk, or fuller's earth, and the like, reduced into fine powder. Some have recommended the *pulvis e cerussa* on these occasions, but that seems rather too fretting an application for the tender bodies of infants; and the milder substances just now mentioned, will do all that can be expected from remedies of this kind, which is only to absorb humidities, and blunt their acrimony. Indeed, if there are beginning ulcerations, a little cerusse might be added to any of the preceding powders, or made an ingredient in some appropriated ointment; in either of which forms it might prove of good service, as a cleanser and cooler, and it would be less liable to produce inconveniencies than in a naked and uncombined state. But such a degeneracy seldom occurs in these com-

plaints ; and therefore, I omit to mention a variety of other efficacious topics for inveterate sores, as they can so rarely be wanted in that intention.

In this manner the common excoriation of infants may soon be healed ; but we never ought to be very precipitant in drying up the runnings behind the ears. A discharge from these parts is frequently critical, and prevents a number of worse diseases ; and therefore it is better to proceed cautiously in this matter, than, by too hasty an application of repellent and deficcative medicines to hazard the bad consequences that might otherwise ensue.

## C H A P. IV.

## Of Eruptions.

**T**HE most remarkable species under this denomination, which are peculiar to infants and children, have been distinguished by the names of *crusta lactea*, *tinea*, and *impetigo*. But we shall likewise take some notice here of another cutaneous affection, viz. the *sudamina*, together with the *perimones*, as being more frequent in early life than at any other period. Each of these disorders has been expressed, in the writings of different authors, by a variety of other appellations, and sometimes the same name has been promiscuously applied; from both which a good deal of confusion and uncertainty has arisen. But they are most commonly known by the names which have been here assigned them; and hence, we shall only mention such



of their *synonyma* as may seem necessary for illustrating their description.

*Crusta lactea*.—This is a loose, moveable, scabby crust, usually of a dusky white or yellowish colour, chiefly affecting the hairy scalp, forehead, or face, and sometimes, though but rarely, extending itself over the whole body. As it never happens but to infants at the breast, and is then only incident to such as are naturally of a fat and plump habit, or are rendered so by the too great quantity or richness of the milk, it has been commonly supposed to proceed from an obstruction of the sebaceous glands by gross milky humours; and from these circumstances, perhaps, or some fancied similitude in its colour, it has obtained its name. It seems to be produced in this manner. The obstructed glands, being necessarily swelled, elevate the incumbent cuticle into an  
equal



equal number of small pustules or vesicles, from which, through the glandular excretories, penetrating their surface, there transudes a thick viscid humour, spreading itself on all sides from one little prominence to another, till, at length, the blended discharge of so many *funiculi*, being still farther inspissated by the air, hardens into a crust, of greater or less extent, according to the size of the part which has been thus affected. After the crust is formed, it is always more moist or dry, according as the subjacent parts are more or less irritated, and excited to a discharge, by the inequalities of its internal surface, and the humour is generally of a thin ferous kind. No blemish remains upon the skin after this disorder is removed, which has been considered as a certain proof of its being seated in the sebaceous glands; whereas, the like affections of

other parts are always succeeded by large and unsightly scars.

*Tinea*.—This disorder is always confined to the hairy scalp, and from the effects it produces, in the shedding of the hair, and leaving the affected parts uncovered, or bald for ever after; it seems to be seated in the small *capsule*, wherein the roots of the hair are implanted; by which means, its roots being entirely destroyed, the hair gradually decays for want of nourishment, afterwards falls off, and can never be succeeded by a fresh growth. It begins with a number of small ulcers, eroding the parts just now mentioned, and discharging large quantities of a thin acrid serum or lymph, which diffuses itself around, and, after being exposed for some time to the air, forms a moist or dry scab, as in the preceding case; but with this difference, that the external surface

surface of the *tinea* is by no means so close or equal as that of the *crusta lactea*, but is marked with various depressions and elevations, which, according to certain appearances they exhibit, have procured the disease several different denominations, as *tinea ficiosa*, *favina*, &c. It never attacks sucking infants, but generally appears at a much later period, and always in such children as are naturally delicate and thin, or have been much emaciated by bad nursing, or otherwise. From this short account of the *tinea* may be collected several marks for distinguishing it from the preceding disorder, namely, the local situation of the disease, the irregular appearance of the scab or crust, and the different age and habit of the patient. It is generally much more obstinate than the *crusta lactea*, and produces what is commonly termed the scald head.

*Impetigo*.—There are several species of *impetigo*, some of which are of a malignant and dangerous nature; but here is only meant a serpiginous or tetterous kind of eruption, affecting chiefly the chin and neighbouring parts, and called by the country people wild fire, &c. From small redish pustules, increasing daily in number, and emitting a viscid humour, a scab is formed, which frequently falls off, and is as often reproduced; but here, as in the *crusta lactea*, no cicatrix is left behind; from whence it is probable that the *impetigo*, likewise, has its origin in the sebaceous glands. The period of its invasion is very uncertain; but it is most common during the first four or five years of a child's age.

Having so far given such a description of these several complaints, in regard to their rise, progress, and essential characteristics,



acteristics, as may be sufficient to make them easily known, what farther remains to be said concerning them, may be delivered in common: But in this, as well as in what has been already said, all theory shall be industriously avoided, as being often fallacious, seldom satisfactory, and of little consequence on the present occasion.

There is none of them dangerous, if it is left to itself, or has not been tampered with by improper applications; but all of them may, at some times, prove very obstinate, and with much difficulty admit of a cure. When the running stops suddenly of itself, or is imprudently repelled, the blood becomes impregnated with the morbid humours; and, hence, many bad symptoms may be produced, according to the disposition of the several parts on which the matter may be deposited in the course of the  
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circulation. If it falls on any of the organs of the external senses, it may destroy their functions, and occasion deafness, and blindness, or the like; but if it is thrown on the internal parts, as the intestines, stomach, lungs, or brain, it frequently produces incurable diarrhæas, vomitings, coughs, and convulsions, &c. The colour of the scab, which is naturally whitish or grey, being changed to black, has been looked upon by some as an unfavourable symptom. But the colour may be variously diversified without any circumstance of danger, provided no improper treatment has been used; and such effects are often owing to different quantities of blood being mixed with the humours of the sore, in consequence of a repeated hard scratching of the part, to which the child is unavoidably provoked by the pruriginous uneasiness commonly attending

tending these eruptions, especially when the crust begins to dry.

In general, their immediate cause seems to be a morbid disposition of the humours, either as to their quantity or quality. And this, again, may be produced by a variety of more remote, or exciting causes; such, for example, as the particular constitution of the child, and the manifold errors in diet, and the other non-naturals, which may contribute to overcharge or vitiate the habit.

Some authors have greatly perplexed the treatment of these disorders, by assigning to each a particular method of cure, and multiplying remedies without any necessity. It were to be wished, however, that no heavier charge could be brought against them, and that their prescriptions could be always acquitted of a dangerous tendency. But these  
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cases have so much affinity with one another, that no such difference of procedure is necessary. They may all be considered as so many issues, or drains, opened by nature for unloading the body of superfluous or noxious humours; and hence, to diminish the former, or correct the latter, is uniformly indicated, which ever of the diseases employs our attention. If therefore any particular variation may sometimes be required, it must be determined more by the temperament of the patient than the genius of the distemper, especially in cases of any standing, with the consideration of which we shall begin.

If the child is of a full bloated habit, bleeding, according to the age and strength, ought to precede all other remedies. But, in different circumstances, this may be omitted, and the cure may then begin with purgatives,

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as rhubarb, or any other gentle laxative; and these should be repeated occasionally through the whole course of the disease, in order to keep the body in a soluble state, which is always of the greatest consequence in such dispositions of the humours as give rise to the present complaints.

Evacuations being premised, it will be proper next to proceed to the use of such alterative medicines as, by increasing perspiration, will gradually promote the expulsion of the offensive matter, and thereby purify the blood and juices. Many preparations have been greatly extolled in this intention; but some of them, as cinnabar and Æthiop's mineral, are almost inactive and useless, while others are attended with too violent effects. The antimonial wine or tincture will perform all that can be effected by medicines of this class, and,

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if properly dosed, they are perfectly mild in their operation. To increase their efficacy, however, they should be joined with a decoction of the woods, which by itself alone will often do considerable service ; and the patient should be kept moderately warm during their use, which ought to be continued for some time, if any benefit is expected from them. They have, besides, this additional advantage, that they can be so managed as to promote the secretion of the kidneys, a circumstance of no small moment in an impure state of the juices. Calomel is likewise a safe and useful alterant on many different occasions, especially when there is reason to suspect a venereal taint of having any share in the disorder. Unless it is intended as a purge, it will answer best in very small doses, and should be combined with such substances as will more freely determine its action to the skin,

as the extract or resin of guaiacum, &c. the child at the same time being kept from the cold, and drinking plentifully of warm diluting liquors: but if it be found expedient to give it sometimes in larger quantities, the purgatives already recommended must be interposed, and repeated more frequently than at any other time, to prevent any bad effects. If there are symptoms of a prevailing acid in the *primæ viæ*, which is so frequent a cause of a diseased state of the blood and humours, it must be corrected by absorbents; and, among these, the *magnesia alba* is justly to be preferred, as having the double advantage of being both a laxative and absorbent; whereas the testaceous powders, and other substances of this denomination, are apt to bring on a costiveness, which, from what has been already observed, would be evidently detrimental in these cases.

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As the age of the patient may vary from three, four, or five months to as many years, it would be impossible, in this place, to define the proper doses of the above medicines. That therefore must be left to the judgment of the prescriber, as a matter that can only be determined by particular circumstances.

In regard to external remedies, few will be necessary if the use of internals is duly persisted in; and none will be proper, excepting such as are emollient and gently deterfive. When there are troublesome irritations, they will be much relieved by being fomented with warm decoctions of althæa and barley, which will likewise contribute greatly to soften and dissolve the scab. But nothing more powerfully produces the latter of these effects than anointing the parts frequently with fresh butter, cream, or oil of almonds, &c. while, at the same time,



time, these substances possess a mild balsamic power, which often manifests itself in disposing the ulcers to heal soon in the most kindly manner. When the discharge of the matter, especially from the eruptions on the head, has been any how prematurely stopt, it has been usual with some to apply a little basilicum, or the like, spread thin upon a piece of linen, over the whole extent of the part, in order to restore it. As the vermin apt to breed in the heads of children, but particularly on these occasions, are often a great obstruction to the cure, the hair should be cut as close as possible, that the topical remedies, intended to destroy them, may be more nearly applied. Various ointments and lotions, &c. have been contrived for this purpose; but most of them are composed of such exceptionable materials as to render a good deal of caution necessary in their use. Staphysagria is the only spe-

specific that can be employed with least hazard on these occasions; and accordingly, if the head is kept as clean in other respects as the nature of the case will admit, and a little of the powdered seed of this plant is carefully sprinkled on the parts most infested, before the usual dressings, it will generally be sufficient to exterminate this noisome brood, or, at least, to prevent their multiplying to any troublesome degree. Its power may be occasionally increased, by adding a small proportion of the powder of white-hellebore root, or of aloes; both which are endued with considerable specific virtues against all sorts of vermin peculiar to the human body.

Sometimes, however, the eruptions on the head will become so inveterate, as to exercise no small degree of patience and attention. In this case, the disease has commonly the appellation of a  
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scabbed or scald head, and, proper allowances being made for the difference of age and strength, is to be treated in much the same manner as the leprosy in adults, for which no particular directions need be given. Let it be only observed in general, therefore, that the main stress of the cure should always be placed on the due use of such internal remedies as may tend, by degrees, to rectify the blood and humours. For, as long as this is neglected, and the root of the evil is still suffered to remain in the habit, the disease, instead of yielding, will continue rather to vegetate and increase, in spite of the most powerful topics that can be employed, allowing them to be otherwise perfectly innocent.

The regimen should be adapted to the nature of the case. When the crusts are dry, a thin diluting diet will be most proper; but if there is a copious

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exudation of matter, the food may be of a more solid and desiccative kind. In sucking infants, the diet of the nurse ought always to coincide with the intentions of cure; which would be still farther promoted by entering her, likewise, on a suitable course of purgative, diaphoretic, and aperient medicines.

When the *Crusta lactea* proceeds from too great a quantity of oily and rich milk, it is sometimes cured only by changing the nurse, and procuring another whose milk is more thin and serous; at least, while the disease is recent, this precaution, with the concurrence of a few doses of physic, will often succeed.

The *Tinea*, as more owing to an acrimony than a superfluity of the humours, is generally very obstinate, and seldom can be removed without a tedious process of cure; which sometimes, however, cannot be completed, even after  
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the running is dried up, and the skin appears perfectly sound, without cutting issues in the neck, or elsewhere, to drain off any remains of the acrid humours, which formerly were wont to pass by the ulcers.

The *Impetigo*, as it has been defined above, and which, on account of its local situation, has been not improperly called *mentagra* by some authors, is commonly more tractable than the preceding disorder. When the case is only slight, and two or three doses of some gentle physic have been premised, the parts may be safely touched with an ointment composed of half an ounce of pomatum and half a dram of calomel, or even with a solution of common salt, sal ammoniac, or white vitriol in water; but it will always be proper to repeat the purgatives, after these applications, in order to carry off any matter that may perhaps be driven back into the blood. In this and other

hot fiery eruptions, a mixture of the juice of house-leek and cream is a common external remedy with the vulgar, and often used with success. If these means, however, prove ineffectual, and the scabs, after frequently falling off, are as often regenerated, it is a sign that the cause of the disorder is more deeply rooted; and in that case, bleeding, with the general method already recommended, will be necessary; nor ought any more powerful topics to be used, till the disease takes a more favourable turn.

*Sudamina.*—This is a kind of rash, consisting in an eruption of a great number of small miliary pustules, red at bottom, but having a thin watery matter at top, and accompanied with a dry skin, heat, and itching. It is common to children and young people of a languine constitution, especially in the summer

summer season, after any violent exercise, succeeded by considerable heat and sweating; and, from the last of these, it has its name. The parts chiefly affected by it, are the neck, shoulders, breast, arms, and thighs; though it frequently appears, likewise, in the neighbourhood of the pudenda and anus. It leaves no marks behind it; only, after the pimples have dried up, the skin appears rough and furfuraceous for some time, till the diseased parts of the cuticle have scaled off.

This complaint, for the most part, is perfectly void of danger; and its cure, in general, is easily effected, by keeping the body cool, moderate exercise, a plain temperate diet, and diluting plentifully with thin broths, whey, or barley and plain water with a little lemon juice.

*Perniones.*—These are small, red, painful tumors, affecting the hands and feet, and especially the fingers, toes, and heels. They are called *chilblains*, before they break; but afterwards they have the name of *chaps*, when on the hands, and *kibes*, upon the heels. They seldom break upon the toes; a circumstance not easily accounted for.

They are owing to a constriction of the small vessels from cold, in consequence of which there is a gradual accumulation of the fluids in the parts, till they first swell, and at length burst; and the extremities are particularly liable to such obstructions, as the circulation here, on account of their great distance from the heart, is naturally more languid than any where else. No danger attends them, though they are always very painful and troublesome; but as they



they are commonly the production of the winter air, they seldom disappear altogether, till the return of a milder season relaxes the vessels, and thaws the stagnant juices.

In regard to the cure, *chilblains*, at the beginning, may sometimes be discussed by keeping the parts warm, and applying such remedies as, by their brisk stimulus, may invigorate the circulation; as red wine, Hungary water, or camphorated spirits of wine, &c. But all these ought to be used warm, and applied to the tumors by means of a piece of cloth, or a sponge. Sometimes hot ashes, contained in a folded cloth, have been tried with success; and it is usual with the common people to bathe the tumified parts with warm brine, or urine, &c. When the tumors break, and produce *chaps* or  
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*kibes*, they require nothing specific, but may be treated with the same dressings which are commonly used for other ulcerated parts.

## C H A P. V.

*Glandular Swellings.*

OF these there are two species which are most peculiar to infants and young children, viz. the *ranula sublingua*, and tumefactions of the lymphatic glands of other parts, as of the neck, groins, &c.

*Ranula.*—The disorder commonly known by this name appears like a large tumor under the tongue, and may be either original or accidental. In the former case, it consists in a preternatural thickness, or crassitude, of the *frænum linguae*, with which a child may sometimes be born; and, in the latter, it is constituted by a morbid infarction of the glands situated on each side of that

membrane, or ligament, and may be the consequence of sudden cold, indigestion, or some external injury. Both kinds produce the same effects with the shortness of the *frænum* already taken notice of, in preventing the natural motions and functions of the tongue, and hindering the child from sucking, or speaking distinctly; for the voice, in particular, has a disagreeable croaking sort of sound, resembling somewhat the noise of that animal, from which the complaint seems to have been denominated both by the Greek and Latin writers.

When the *Ranula* is natural, it has the appearance of a large fleshy mass, but without pain, discoloration, or any other inconvenience than those already mentioned. In the other case, however, the tumor, besides confining the tongue, is either of an inflammatory or cedema-

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tous nature, or it partakes of both, and accordingly, it is red, hard, painful, and tending to suppuration, or whitish, soft, and indolent, containing a melicerous kind of matter in a proper cyst, or follicle, &c. Hence, therefore, its different species must be evident both to the touch and inspection.

If it is found that the tongue is tied down by a thick, fleshy ligament, the safest and best method will be, while the part is yet soft and yielding, to direct the nurse to stretch it frequently by a gentle application of her finger; for the operation by incision cannot be performed with the same freedom and safety here, as in the case of a short membranous *frænum*, lest the cutting through so large a substance might produce a dangerous hæmorrhage, or the wound should prove difficult to heal. When it has the appearance of

a soft fungous mass, it may be frequently, but cautiously touched with Roman vitriol, or the lunar caustic. If it does not yield to these means, it will generally continue for life.

When there are symptoms of inflammation, and no matter has yet begun to be formed, we should endeavour to resolve the tumor by evacuations, and other proper means, according as the patient can bear them, or the state of the case requires. If keeping the body cool, giving plenty of thin diluting liquors, and gentle laxatives should fail, bleeding ought to be tried, especially with leeches, as near the affected part as possible. But if a suppuration takes place, notwithstanding all the methods used to prevent it, a contrary course ought to be pursued, and the process of nature is then to be encouraged, by applying proper cataplasms under the patient's

patient's chin, in order to facilitate the maturation of the abscess. By this means it will soon break of itself, or it may be opened with a lancet, when there is a sufficient collection of matter; in either of which cases, let it be dressed three or four times a day with pledgets dipt in a mixture of honey of roses and tincture of myrrh; which, however, may be rendered more deterfive by a small addition of the *unguentum egyptiacum*, if the ulcer should grow very foul. When the abscess is sufficiently deterged, and begins to consolidate, the mouth should be washed frequently every day with some restringent gargarism, or a solution of alum in water, for preventing the growth of fungous flesh, which would be very inconvenient in this part, and almost frustrate the intention of the cure.

*Tumefactions of the lymphatic glands.—*

These happen most frequently in the glands

glands of the groins, arm-pits, and neck; and when the swellings are considerable, they render the motions of the thighs, arms, and head somewhat difficult and painful.

They may be owing to any violent exercise, as hard running, or much walking, &c. by which means, the circulation being greatly hurried, the system of the lymphatic arteries is supplied with a greater quantity of fluids than the corresponding veins can immediately carry off; and hence a temporary obstruction is produced, in consequence of which the glands are distended and swelled by the overplus. Another cause may be cold, either contracting the small lymphatic vessels, or, in some degree, incrassating the lymph itself.

It is evident, therefore, that these swellings cannot be very obstinate, but must



must easily subside by rest, warmth, and plentiful dilution. And, indeed, they are of so little consequence that they have been mentioned more to fill up the place which has been commonly assigned them among the diseases of children, than from any opinion of their claiming medical attention.

## C H A P. VI.

*Of the Aphtha, or Thrush.*

THIS is a disease to which infants and children are frequently subject, almost from their birth to the end of the first three or four years of their age. It is generally ushered in by the same febrile symptoms which usually precede the small pox, or other exanthematous disorders; but when *aphtha* appear in the mouth from a venereal cause, which is sometimes the case, or happen to very young infants, before the bowels have been affected with any complaints, there is then little or no fever to be observed. It manifests itself in the form of small white specks, or superficial ulcers, appearing first on the tongue and palate, till, multiplying and uniting by degrees, they at length cover the entire surface of the mouth and *fauces*;  
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from whence they are sometimes propagated downwards through the whole tract of the alimentary canal, and form one continued crust from the lips to the lower extremity of the *rectum*. This crust will sometimes fall off and be renewed alternately for a number of times, but the succeeding one is always of a darker colour than the former, changing successively from white to yellow, brown, livid, or black; and from this gradation in its appearance, which is the effect of a progressive mortification, we may easily judge of the malignity and event of the distemper. But, happily, the evil does not often arise to this height, unless it has been too much neglected at the beginning, or the previous habit of body has been exceedingly bad.

When the *apthæ* are numerous, the inflammation, heat, and pain are very great; there is, hence, much restlessness and

and watching; the mouth and throat become likewise so tender, that the child cannot sometimes grasp the nipple, or swallow any other food; and consequently, from the joint effects of irritation and inanition, the fever is greatly increased. But if the disease is allowed to proceed, other symptoms will soon take place, as frequent vomitings and purgings, by which the child will be still farther weakened. These are produced by the contents of the stomach and bowels becoming daily more and more acrid from the continuance of the fever; and the stools, in particular, give manifest indications of such a degeneracy, being either green and bilious, or sour, curdled, and slimy from a prevailing acid; though sometimes the stools are almost as thin and colourless as water; from whence, and their being attended with violent gripings, this kind has been called the *watery gripes*. None of these  
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symptoms, however, is a constant attendant on the thrush; and, on the other hand, all of them are to be met with on many other occasions entirely unconnected with this disease.

An acrid humour, originally produced by an acid corruption of the food in the *prime viæ*, is the cause of the ulcers, by inflaming and eroding the extremities of the mucous and salivary ducts. Hence therefore, children, whose food is naturally acrescent, are more liable to the *apthæ* than adults, in whom it is chiefly symptomatical, as well as to all other disorders depending on an acid cause; but especially those children, whose stomach and bowels are weak, and unfit to perform the office of digestion. The disease is always attended with danger, and requires the most early and effectual assistance; otherwise, if it is neglected till the ulcers put on a dusky hue, or

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acrid vomitings and purgings have supervened, the best remedies may then come too late.

If the fever runs high, and the child is old and strong enough to bear that evacuation, some blood should be taken away, and the operation even repeated if the symptoms require it, or the inflammation, heat, and restlessness continue; but this, at the beginning, will seldom be necessary, and ought always to be cautiously prescribed for these tender patients. As a foulness of the stomach and bowels seems to have so great a share in the production of this disorder, the readiest way of removing it seems to be, to strike at the root of the evil immediately, by unloading the *viscera* of their noxious contents, both upwards and downwards. For this purpose, therefore, we should begin with gentle pukes, and afterwards administer lax-

laxatives. In the first intention, a single grain of Ipecacuan may be given in a spoonful of any proper liquid, and repeated every half hour, for two or three times, till it begins to operate. We need not be very anxious about the form of exhibiting this nauseous medicine, as the sense of taste is generally pretty much impaired in the present complaint; but it is always safest to give it in small doses at first, and increase the quantity in this gradual manner, as occasion may require. The *vin. antimon.* in the quantity of five or six drops, and repeated in the same manner, may likewise be used as an emetic, with good success: but this dose, as well as that of the root, is only calculated for very young children, not exceeding five or six weeks, and therefore the quantity of each ought to be proportionally increased for older subjects. These medicines will often procure a discharge both ways. But if they

they should not likewise purge, and to make sure that the bowels are thoroughly cleansed, suitable doses of rhubarb, jalap, or manna should be given; or an evacuation may be effected by glysters, if ulcerations in the *rectum* do not render that mode impracticable. And these remedies will be the more necessary, if the child was before costive; which sometimes is the case, especially at the beginning.

After the passages have been emptied, absorbents will next be proper; but, notwithstanding the high opinion which has been long entertained of the most usually employed articles of this class, for their efficacy in correcting acidities, they must not be deemed sufficient to supersede all farther use of evacuants. A total expulsion of the morbid matter is the most certain method of giving relief; and therefore, when the weakness of the patient



patient forbids the repetition of an emetic, a small quantity of rhubarb should always be joined with the *sestacea*, or occasionally interposed, in order to carry off any remaining acrimony. These powders, however, are apt to fur the tongue, and thus, by preventing a free secretion of the saliva, to render the mouth dry and parched; for which reason it is sometimes necessary to forbear their use, though it be otherwise indicated. *Magnesia alba* therefore, will be found to be a medicine of more general utility in this intention, both as being less liable to the inconvenience just now mentioned, and likewise, as it will seldom stand in need of any purgative addition. It may be given in the child's pap, to the quantity of a scruple, or more, three or four times a day.

In regard to topical applications, the mouth may be frequently washed with  
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some barley water, or any emollient decoction, in which honey of roses has been dissolved; and this, in slight cases, will often be sufficient for cleansing and healing the ulcers. When a more detergent application has been wanted, some have added lime water to this mixture; and others have successfully used the *mel rosaceum*, or common honey, with a few drops of the spirit of vitriol. Olive oil is a frequent remedy with many country people, and it often produces good effects. As to gargarisms of an acid nature, though much recommended by some practitioners, they seem to be very exceptionable; since, by contracting the emunctories of the saliva and mucus, and thickening those humours, there may be reason to suspect them of proving sometimes hurtful.

Dr. Armstrong, who has lately furnished some judicious observations on the  
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few diseases incident to infants, of which he has treated, recommends a solution of the white vitriol, in lieu of all other topical remedies. The white vitriol, he says, dissolved in common water, in barley water, or in the pectoral decoction, in the proportion of half a scruple to eight ounces, is the best topical application he knows; and that if this should prove too weak, it will be an easy matter to make it stronger by degrees. He desires, as is usual in applying all other remedies of this kind, a linen rag to be dipped in the solution a little warmed, and either with the finger, or tied on a bit of stick, to be rubbed on the child's mouth, three or four times in the twenty-four hours, according to the urgency of the case, or as the tendernefs of the parts will admit. If the child swallow a little now and then, a tea spoonful or so, he says it is so much the better, as it helps to cleanse the stomach and bowels at the

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same time. He adds, that white vitriol being so generally useful in collyriums, and of so cleansing a nature, he was induced first to try it in a gargle, and that he found it succeed so well both in infants and adults, that he seldom now uses any other, except where the tongue is dry and parched. As it cleanses not only the mouth and throat, but likewise the stomach, this quality, he observes, makes it doubly useful to children, who have not sense to spit out whatever the mouth is washed with.

To illustrate still farther the uncommon efficacy of the white vitriol on these occasions, the doctor next relates a case of a very bad canker in the mouth, in a boy of five years old, which, he informs us, he cured in the space of a few days, by means of this gargle alone.



## C H A P. VII.

*Of Teething.*

**M**ANY of the other complaints which commonly affect infants and children, are likewise incident to adults, though not so often; but this may be considered as peculiar to early life. As teething is a necessary operation of nature, some have denied it to be a disease. How far such a distinction is just or proper, would be of no great consequence to enquire, it being sufficient only to observe, at present, that teething is, at least, the source of so many diseases, and the cause of so much mortality among infants, that a greater number, perhaps, is carried off by means of this alone, than half their other diseases put together.

The period of teething varies considerably, being earlier in some children, and later in others; but it generally begins about the sixth or seventh month. As many of the disagreeable symptoms which so frequently attend it, are likewise common on other occasions, it is often difficult to say, what the nature of the complaint really is, or how to prescribe a remedy. If, however, the child is of a proper age, if it is frequently observed to thrust its fingers into its mouth, if it likewise drivels much, and particularly, if the gums, upon inspection, appear tumified and inflamed, we may venture to conclude, with tolerable certainty, that the disorder proceeds from teething.

The usual symptoms, in difficult cases, are, fretting, restlessness, warching, frequent and sudden startings, especially in sleep, costiveness, and sometimes a violent diarrhæa, fever, or convulsions; all which are owing to the irri-

irritation and pain produced, when the teeth push forward from the sockets, and their sharp points begin to work their way through the periosteum and gums. But though some children suffer much from dentition, others undergo it with little inconvenience. In general, those children breed their teeth with the greatest ease, who have a moderate laxity of the bowels during that time, or a plentiful flow of the saliva from the glands of the mouth; but on the contrary circumstances, or when the intestinal discharge is too profuse, the symptoms are always more numerous and violent, and the danger increases accordingly.

In mild cases, we need only, when necessary, endeavour to promote the means by which nature is observed to carry on the business of dentition in the easiest manner. For this purpose, if a costiveness is threatened, it must be prevented,

vented, and the body kept always gently open; and the gums should be relaxed by rubbing them frequently with sweet oils, or other softening remedies of that kind, which will greatly diminish the tension and pain. At the same time, it will be useful to give the child some smooth polished body to put in his mouth, as a piece of coral, crystal, or the like; for the repeated muscular action, occasioned by the constant biting and gnawing at such a substance, will increase the discharge of the salivary glands, while the gums will be so forcibly pressed against the advancing teeth, as to make them break out much sooner, and with less uneasiness, than would otherwise happen. Some likewise recommend a slice of the rind of fresh bacon, as a proper masticatory for the child, in order to bring moisture into its mouth, and facilitate the eruption of the teeth, by exercising the gums. If these means, however,

prove



prove ineffectual, and bad symptoms begin to appear, the patient will often be relieved immediately, by cutting the inflamed gum down to the tooth, where a small white point shews the latter to be coming forward. When the pulse is quick, the skin hot and dry, and the child of a sufficient age and strength, emptying the vessels by bleeding, especially at the jugular, will frequently be necessary here, as well as in all other inflammatory cases; and the belly should be opened from time to time, by emollient oily or mucilaginous glysters. But, on the contrary, if the child is low, sunk, and much weakened, repeated doses of the spirit of hartshorn, *tinctura fuliginis*, and the like reviving medicines, ought to be prescribed. Blisters, applied to the back, or behind the ears, will often be proper in both cases. A prudent administration of opiates, when their use is not forbid by costiveness, or

otherwise, is sometimes of great service in difficult teething, as by mitigating pain, they have a tendency to prevent its bad effects, as a fever, convulsions, or other violent symptoms; and often they are absolutely necessary, along with the testaceous powders, for checking an immoderate diarrhæa. But a more ample account of the treatment of this last symptom, as well as convulsions, must be referred to the several chapters on these subjects.

When cathartics are necessary, but the child seems too tender and weak to bear their immediate operation, they should be given to the nurse; in which case they will communicate so much of their virtues to the milk as will be sufficient to purge the infant.

## C H A P. VIII.

*Of Watching, and Frights in Sleep.*

**A**S most young children, if in health, naturally sleep much, and pretty soundly, we may always be apt to suspect that something is amiss, when they begin to be subject to watching and frights : symptoms which seldom, or never occur, but either in consequence of some present disorder, not yet taken notice of, or as the certain forerunners of an approaching indisposition. We should immediately, therefore, endeavour to find out their cause, that we may use every possible means to remove or prevent it ; otherwise the want of natural rest, which is so very prejudicial to persons of all ages, will soon reduce the infant to a low and emaciated state, which may be followed by an hectic fever, diarrhæa, and all

the other consequences of weakness and debility. These symptoms, being always the effects of irritation and pain, may proceed, in very young infants, from crudities, or other affections of the *primæ viæ*, producing flatulencies, or gripes; about the sixth or seventh month, they may be owing to that uneasiness which commonly accompanies the breeding of the teeth; and after a child is weaned, and begins to use a different kind of food, worms become frequently an additional cause of watchings and disturbed sleep. Hence, to give the necessary relief on these occasions, the original complaint must first be ascertained, from the child's age, and other concomitant circumstances, and afterwards treated according to the nature of the case. Women and nurses are too apt to have recourse to opiates in the watchings of children, especially when their own rest happens



happens to be much disturbed by their continual noise and clamours. But this practice is often prejudicial, and never ought to have place when the belly is in the least obstructed.

## C H A P. IX.

*Of Ruptures, and the Prolapſion of  
the Anus.*

THE soft and yielding texture of the ſolids in young children renders them ſometimes liable to ruptures, but eſpecially thoſe infants who are ſubject to much coughing, or crying, &c. as by theſe means the contents of the abdomen are apt to be too forcibly impelled againſt the leaſt reſiſting parts. There are two principal ſpecies of ruptures, which, from the parts wherein they happen, have been called, in general, *Exemphalos*, or *bernia umbilicalis*, and *Bubonoccele*, or *bernia inguinalis* : but each of theſe is diſtinguiſhed by other more particular names, according as the hernial tumour happens to be formed by

by the protrusion of the omentum or intestines singly, or by both together.

An *exomphalos*, or protuberance of the navel, may easily be produced, as the *peritonæum* at that part is entirely destitute of any muscular covering, or support; and therefore it will the more readily yield, and be stretched outwards, when the *viscera* are violently pushed against it by the causes just now mentioned.

In like manner, by the same efficient causes, or too tight rollers compressing the abdomen, the *viscera* are sometimes forced down through the rings of the muscles into the groin, where they form the inguinal rupture; and if they descend from thence into the scrotum, the disease is then called *hernia scrotalis*. This, however, can never happen unless the *peritonæum*, which covers the rings, is either broken or considerably stretched.

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That the laceration of the membrane was originally believed in this country seems more than probable from the English name of the disease; but, though this may sometimes be the case, the latter is the most usual circumstance, as almost all operations and dissections shew the bowels to be contained in a bag, or sack, formed by a production of the *peritonæum*. Infants and young children are not liable to the many other accidents which so frequently give occasion to the inguinal rupture in adults, and therefore it would be unnecessary to mention them in this place.

In both kinds of rupture, the tumor is soft, slippery, and unequal, when it is formed by the omentum; but when the intestines are concerned, it is considerably firmer, and of a more rounded figure; and besides, it yields a murmuring kind of noise, if the intestinal portion be



be empty, or otherwise it readily discovers the contained fœces to the touch. Again, a certain degree of pain must always attend these disorders, owing to the stretching of the parts with which the protruded *viscera* are connected; and its situation in the abdomen will be higher or lower, according as the omentum or intestines are prolapsed. But this circumstance can be of little use to us, in distinguishing which of these immediately produces the ruptures of very young children, on account of their inability to describe their feelings.

As these cases are seldom attended with a strangulation of the displaced parts, the contents of the hernial tumor are in general pretty easily reduced; after which, they may be retained in their natural situation by proper bandages or trusses, adapted to the seat of the disease. The bandages, however,

ought to be worn for a long time, otherwise the patient will be liable to a relapse ; and the cure, in the mean while, should be promoted by rest, an horizontal posture, and preventing the child, as much as possible, from crying, &c. For the relaxed parts cannot soon acquire a sufficient degree of strength, if, by these means, care is not taken to keep the *viscera* from pressing against them, and putting them frequently on the stretch ; and astringents, or other external applications, will rarely be wanted unless these precautions are much neglected. If, notwithstanding, there should sometimes be a greater difficulty in reducing the ruptures of children than is very common, the impediments must be removed by the same means which are used on all other occasions of the like nature ; but as these are sufficiently well known, they need not be specified.

Male

Male children are sometimes subject to a watery tumor, or swelling, of the scrotum, which is commonly called *Hydrocele*; but this is one of that kind which surgeons have distinguished by the name of *false hernia*. It may be owing to any cause that prevents the absorption of the serous lymph which is effused within the cavity of the tunica vaginalis for lubricating the testes, or to such a compression on the returning veins, as obstructs its progress upwards.

When it proceeds from the former of these causes, it is easily cured by the exhibition of purgative and diuretic medicines occasionally, together with the use of external corroborants and discutients, as fomentations with camphorated spirits, astringent infusions and decoctions, or *spiritus mindereri*, &c. If the lymphatic veins are compressed, the cause ought to be enquired into, and immediately removed.

Pro-

*Prolapsion of the Anus.*

THIS disorder consists in a falling down of the internal coat of the rectum, and may be owing to a natural weakness, or any cause that excites a tenesmus or too much straining at stool.

The intestine is easily reduced; after which, compresses, dipt in astringent decoctions, may be applied to the anus, or the same liquors may be injected, to strengthen the tone of the rectum. In cases of debility, the habit ought to be fortified by a suitable regimen, and other proper means.



## C H A P. X.

*Of Vomiting.*

THE delicate state of the stomach in children renders them often subject to vomiting, which is generally occasioned either by the curdling of the milk, or its being taken in too great a quantity. When this disorder is not violent, or so habitual as to deprive the child of the necessary supplies of food, it is seldom dangerous, and for the most part easily remedied. The medicine which ought first to be prescribed, is a gentle emetic. Ipecacuanha, as being reputed the mildest, is what is commonly used. But its nauseousness upon the palate is a material objection against administering it to infants; and we find from daily experience, that antimonial wine, or a weak solution of emetic

emetic tartar \*, may be substituted in its room, with the greatest safety. From five to ten drops of the antimonial wine is generally sufficient for an infant under a month old ; after which period it may be proportionally increased. The best way,

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\* The following solution of emetic tartar is recommended by Dr. George Armstrong :

“ The solution I commonly use, says he, is one grain of emetic tartar, dissolved in three ounces of water, and sweetened with a little Syrup. To very young infants I give a small tea-spoonful ; to one of a month or six weeks old, a middling one ; and to one of two months, or so, a large one ; and so on, repeating it in the same manner as the antimonial wine. Regard must likewise be had to the strength as well as the age of the infant.

N. B. The solution should not be kept above three or four days, because by standing longer the tartar separates from the menstruum, and sticks to the side of the phial, whereby the medicine is weakened.”

way, however, is to begin with small doses, which, if they should not operate sufficiently, may be repeated in half an hour. And where the child is colic, it is always proper to prescribe a gentle glyster before the exhibition of the emetic.

After the the vomit, the chalk julep may be prescribed, or the testaceous powders, in the following manner:

R Aq. mentha commun.

Cinnamom. ten. ana unc. duas.

Chel. cancror. præp. drachm. duas.

Syr. caryophil. semunciam. Misce.

Detur cochleare unum frequenter,  
agitato prius vase.

If these remedies should prove ineffectual, or the disorder become more violent, we may then have recourse to the moderate use of laudanum; of which two drops may be taken at a time,  
out

out of a spoonful of the above mixture, either alone or rendered more antiemetic by the addition of a scruple of the salt of wormwood or tartar, and half an ounce of the juice of lemons.

If the vomiting should continue obstinate, the operation of internal remedies may be assisted by aromatic fomentations made with wine, applied warm to the pit of the stomach, or the use of stomachic plaister.



## C H A P. XI.

*Of Gripes.*

**W**HATEVER produces vomiting, by irritating the nerves of the stomach, may likewise occasion gripes; if its action be determined to the intestines. This disorder is another to which infants are extremely subject, from various causes, such as the retention of the meconium, or, what is more generally the case, a collection of acid humours in the bowels, with the flatulence consequent thereupon. Gripes are also frequently occasioned by the vellation of worms, though infancy be in general less exposed to such a cause of the disease, than the more advanced stages of childhood. When the gripes are violent they sometimes occasion convulsions

vulsions that terminate in immediate death.

When the disorder supervenes soon after birth, which may be inferred from the child being much addicted to crying, we may generally conclude that it is occasioned by a retention of the meconium, which must therefore be discharged as fast as possible. For this purpose the following remedy may be given :

*R* Ol. amygdal. duk. vel olivar.

Syr. violar. ana semunc. Misc.

Detur cochleare parvulum frequenter.

A drop of the ol. anisi may be sometimes added to the above mixture ; but in this species of the disorder, I have generally found the internal use of carminatives to be attended with little benefit, whilst the passage is obstructed, though they may be advantageously ad-  
mini-

ministered in glysters, along with lubricating and emollient ingredients.

The above mixture is also proper when the gripes appear to be occasioned by the child having taken too large a quantity of milk; or, instead of the oil, a few grains of rhubarb may be given along with the syrup. The magnesia alba, so much celebrated in all disorders arising from acidity, is here an incomparable medicine. But when the gripes are owing to the cause abovementioned, the child must be debarred, for a little time, from its acedent food, till a mitigation of the complaint is procured.

When the gripes proceed from flatulence, the occasional use of a carminative glyster is of great advantage; as is likewise the practice of anointing the abdomen with a mixture of two parts of oil

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of sweet almonds or olives, and one of brandy; after which the belly is to be kept warm with a flannel cloth.

The method of treating the gripes, when proceeding from the worms, with the cure of the convulsions frequently attending this disorder, will be related in the particular chapters on these subjects.

For preventing the gripes, it is usual to boil along with the child's panada some anise, or other carminative seed, or to add to it a very little wine or brandy. The use of the testaceous powders, however, formerly recommended, is by far the most eligible and effectual expedient for the purpose; during the continuance of which medicine a few grains of rhubarb ought to be occasionally interposed, or both may be superseded by magnesia alba. In many children, especially those descended of weakly parents,

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the gripes are sometimes so habitual as to require the regular and constant application of palliative remedies. I have often known, however, a natural disposition to this disorder entirely overcome in a more advanced age, when the child has become able to take proper exercise; till which period the use of flatulent food, and catching of cold, ought to be carefully avoided.

## C H A P. XII.

*Of a Diarrhæa, or Looseness.*

THE same causes which produce the gripes in children render them also frequently subject to a looseness, by accelerating the peristaltic motion of the bowels, and stimulating the glands to a more copious discharge of their fluids. A laxative state of body, however, being in general beneficial to children, a looseness is to be reckoned a disease only when it is violent, or has continued too long. If the stools be sour, slimy, green, or curdled, we may always pronounce the evacuation to be salutary; since it is not the discharge, but the production of such humours, which ought to be restrained. Even where the purging is thin and watery, it should not be checked too suddenly, as it often proves critical, espe-

especially when the child has caught cold, or an eruption on the skin disappeared. We sometimes likewise observe an evacuation of this kind succeed a humid state of the atmosphere; in which case it undoubtedly proves of advantage, by carrying off a quantity of ferous humours, which would otherwise load or relax the habit. A gentle degree of fever accompanying a looseness in children, is generally not so dangerous as in adults under the same circumstances, and, if attended with no other disorder, is for the most part only symptomatic.

The first and principal intention in the cure of a diarrhæa is, to evacuate the offending matter; which is usually performed by premising a gentle vomit of ipecacuanha, and afterwards exhibiting small and frequent doses of rhubarb; interposing absorbent medicines to mitigate the acrimony of the humours. I

am fully of opinion with Dr. Armstrong, that, as a purge in this disease, magnesia is preferable to rhubarb, not only as it is at the same time absorbent and laxative, but operates without exciting gripes. I must, however, join with him in thinking the use of the antimonial wine more effectual than either; since by acting both as an emetic and purgative, it procures a speedy extermination of the disease. By being measured in drops, and diluted with water, it may be proportioned to the weakest constitution; and not being disagreeable to the palate, it may likewise be repeated as often as occasion requires. The exhibition of it even for once, will mitigate the disease, and pave the way for the use of absorbents much more speedily than by the separate successive administration of an emetic and purgative medicine. If the strength of the child will permit, however, the antimonial wine should be repeated every

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six or eight hours at least, till the stools begin to assume a more natural appearance; from which period, to the total extermination of the humours, a somewhat longer space may be allowed to intervene between the doses. It must not be forgot, that, when the drops are to be repeated, the quantity ought always to be a little increased, as their efficacy in exciting a puke is generally diminished by their use.

It is a practice with many to attempt the cure of the diarrhæa entirely by absorbent medicines, and astringents. But if these be given before the acrid humours are discharged, though the disease may appear to be mitigated for a little time, it soon afterwards breaks forth with greater violence, and often proves fatal. After proper evacuations, however, these medicines may be administered without any bad effect, or even with con-

siderable advantage; though, if the disorder has once been suspended by repeated pukes, the use of such palliative remedies becomes in a great measure unnecessary.

Should any gripings or restlessness remain after the stomach and bowels have been cleansed, a drachm of diacodium, or the syrup. papav. rheados, may be given in a little plain cinnamon water, every three or four hours, till these symptoms have ceased. Dr. Armstrong informs us, that when the stools smelt very sour, were curdled, or green, he has given three or four drops of the *lixivium tartari* with the emetic; and afterwards, between whiles, the same quantity in a little water, sweetened with sugar, or syrup, with very good success. When the milk is apt to curdle on the stomach, he observes, that this medicine is particularly useful, and, as far as he has seen, perfectly harmless. In such cases,

cases, however, there is not any medicine more innocent or efficacious than the *magnesia alba*, as I have experienced for many years.

Besides the abovementioned causes of a diarrhæa, the disorder may likewise be produced in children by other accidents, such as catching of cold, or the irritation of worms. In these cases, the complaint is only symptomatic, and must be treated by such methods as are adapted to the original cause of the disease.

## C H A P. XIII.

*Of Worms.*

**C**HILDREN are rarely troubled with worms until they are weaned, but after that period vermicular complaints become very common. Worms are generally distinguished into three kinds; namely, the round and long, the round and short or ascarides, and the broad or tenia, so called from their resembling a ribbon. This last mentioned sort, which is white and long, and remarkably full of joints, is subdivided into two species; one properly known by the name of tenia, which appears to be destitute both of head and motion; the other called solium, which evidently moves, and has a round head, somewhat resembling a wart. Besides these species  
of



of worms, some authors mention another, of a flat kind; called cucurbitaria, which are very short, and sometimes connected with each other, like the links of a chain. The ascarides are found only in the intestinum rectum, but the residence of the other kinds is either in the stomach or small guts.

The symptoms excited by worms are either such as are common to all the tribes, or peculiar to the different species. The common signs of worms are an offensive breath, sparkling eyes, a pale or livid complexion, great thirst through the day, with a dryness of the tongue and lips, which abate at night, when a copious discharge of saliva ensues, that generally continues during sleep, together with a grating of the teeth, and sometimes cold sweats. A looseness is also frequent, in which the excrements are whitish. The urine is frothy, differing sometimes in colour, but for the most part turbid.

The particular symptoms attributed to the long and round worms are a loathing of food, or, on the contrary, an excessive appetite, a hiccup, squeamishness, vomiting, cholic pains, distention of the belly, a dry cough, shiverings, an itching of the nose, startings, and shrieks, during sleep, the eyes hollow, sometimes red, the cheeks either flushed or of a leaden colour, an intermitting pulse, irregular fevers, faintings, convulsions, epilepsy, and vertigo.

The reputed signs of the tenia are frequent numbness and indolence, a weight about the navel, with lassitude and faintness after eating.

The particular symptoms excited by the solium are shifting pains in the region of the liver, especially after fasting; succeeded by similar complaints of the stomach, which are sometimes attended with

with a pain of the back, continuing for a considerable time.

This species of worm is said to produce in women more pernicious effects than in men. But the diversity of symptoms can arise only from a greater delicacy of constitution. Among those peculiar to the female sex, however, we may reckon a depraved appetite, and suppressions of the *menfes*.

As the ascarides are scarce ever found any where but in the rectum, the symptoms they produce are milder than those of the other kinds: being, for the most part, only itchings in the anus, a tenesmus, and sometimes, though very rarely, faintings.

Though the various symptoms above enumerated be generally regarded as the pathognomonic signs of worms, it is certain

certain that many of them may be excited by a foulness of the bowels, where no such inhabitants exist; and this observation should lead us to adopt such a method of cure, as is best calculated for extirpating each of the possible causes of the complaints. It happens fortunately, that many of the medicines which are used in cleaning the stomach and intestines from viscid humours, are at the same time good anthelmintics; and if all the remedies in the latter class are not reciprocally advantageous, they are at least entirely innocent. In these ambiguous symptoms, it is proper to begin with cleansing the *primæ viæ*, which are always more or less loaded with phlegm, whatever be the particular cause of the disorder.

If the child complain of a sickness, or oppression at the stomach, I generally prescribe a vomit of antimonial wine, but



but where the ailment is wholly confined to the intestines, it is most rational to have recourse to purgatives. A few grains of rhubarb, adapted to the age of the child, along with a grain or two of calomel, is in this case an excellent purge; as are likewise proper doses of rhabarbarine or aloetic tinctures diluted with a little water, where the patient can be prevailed with to take them. With the same intention I have often given two or three grains of calomel, sometimes less, but seldom more, at bed time, and next morning some gentle purgative, both which are to be repeated every three or four days till the complaints disappear.

In these circumstances the elixir proprietatis is likewise an admirable medicine, as it not only dissolves and evacuates the phlegm which might irritate the nerves of the stomach and afford a receptacle

ceptacle to the vermicular *ova*, but at the same time, by its bitterishness, acts as a powerful anthelmintic. Six or eight drops of it, more or less in proportion to its purgative effects, may be given twice a day upon a bit of sugar.

During the intervals of purging, whether the complaints proceed from a foulness of the bowels or worms, stomatic medicines, such as bitters and chalybeates, should be used; which are successful both in destroying the worms, and strengthening the tone of the *viscera*. For the same purpose some spoonfuls of lime-water may be drank frequently through the day, with great advantage.

When the complaints arise evidently from worms, it may be sufficient to give such remedies as are merely anthelmintic. Of these the principal are the *semen sanctonicum*, *flores tanaceti*, and *pulvis stanni*,  
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the last of which is particularly celebrated against the tenia, or broad worm.

The method of cure hitherto related is chiefly of use for destroying the larger kinds of worms, which have their residence in the stomach or small guts; but where only the ascarides exist, glysters made of bitter materials are more effectual than internal medicines. Before they are administered, however, it is thought to be of advantage to premise a glyster of milk and sugar. Oil, which is noxious to all kinds of worms, in whatever way it be taken, is extremely well adapted for injections.

Ointments composed of anthelmintic ingredients, and rubbed upon the belly, are likewise imagined to be of service in destroying or expelling of worms. But though I have often prescribed them, I cannot vouch for their efficacy. They  
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are certainly not to be depended upon alone; and when used along with other remedies, I should be inclined to ascribe little to their influence.

When children are seized with erratic irregular fevers, attended with the symptoms often produced by worms, it is usual to denominate them universally worm fevers, though I think there is reason to question the propriety of that general determination. We have already seen that the same symptoms are indifferently excited by worms and a foulness of the bowels; perhaps I might add, by any other cause of irritation in the *primæ viæ*. Ought we then to impute to worms what may certainly be the effect of one other cause at least? When we have not ocular demonstration of the existence of worms in the stools, I should rather first suspect a foulness of the bowels to be the most probable cause of the complaint;



plaint; since it seems reasonable to suppose that a collection of viscid humours must have taken place in the intestines, before a convenient repository is formed for the vermicular *ova*. And as we know that such humours can excite the same symptoms with worms, why should we blindly ascribe to the latter, complaints which may be produced without them, and by a cause too which is supposed necessarily to exist previous to the deposition of the vermicular *ova*.

A few years ago I was desired to visit a girl who was thought to be bad of a worm fever. She was about twelve years old, and rather of a delicate constitution. She had kept her bed for about a fortnight before I saw her. Her pulse was quick, and sometimes intermitted: her tongue dry and whitish, but she had no considerable thirst. Her cheeks appeared sometimes flushed, and,  
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in her sleep, which was scarcely ever sound or refreshing, her eyes seemed only half shut. She grinded her teeth, and had frequent startings. Her breath was fetid, she complained of shifting pains in her belly, and was generally costive. From the third day of the disease, the apothecary had plied her with anthelmintic powders, very seldom interposing any purgative, as thinking it unnecessary considering that she took so little food. She had, however, got two or three glysters, but no worms were ever observed in her stools.

From the various circumstances of this patient, with the ineffectual use of approved anthelmintic medicines, I was induced to think that the disorder proceeded chiefly, if not entirely, from a foulness of the bowels, and therefore prescribed the following purge to be taken

taken immediately, first prescribing a common glyster :

R Rhabarb. drachmam unam.

Coque in aq. fontan. unc. quinque ad unc. tres colaturæ, in qua dissolve

Cryſtal. tartar. unc. unam, & adde

Aq. cinnamom. ſ. v. unc. unam.

Capiat cochlear. quatuor ſtatim, & cochlear. unum omni ſemihora poſtea, niſi alvus prius moverit.

This potion purged briskly, and brought away a great deal of fæces, of a clayey conſiſtence and dark colour, in all which, however, not the ſmalleſt appearance of worms was obſervable. The ſymptoms, nevertheless, immediately abated, and by a repetition of the purgative ſhe was perfectly freed from all her complaints.

Dr. Armſtrong relates a caſe of a ſimilar nature, where the diſorder continuing  
after

after the discharge of a few worms, it was still thought to be supported by the influence of that pernicious tribe. The child died, and upon being opened, the doctor could not discover the least appearance of a worm of any kind, though he examined the stomach and the whole intestinal canal, with the greatest care possible. But the large intestines contained a great quantity of a thick, viscid, clayey, greenish excrement, very fetid, and which Dr. Armstrong imagined to be the chief cause of the boy's illness; for the bowels themselves seemed to be in a sound condition.

These cases are sufficient to evince, that all the symptoms commonly attributed to worms alone, may be produced by a foulness of the bowels, without the existence of any vermicular inhabitant. From which I would earnestly recommend to practitioners, never to rest



rest satisfied with administering to their patients such medicines as are possessed only of an anthelmintic quality, but to join to them those which are particularly adapted for cleansing the *primæ viæ*; as it is uncertain whether a foulness of the bowels may not be the cause of all the complaints. This practice is still the more adviseable, on account of viscid humours in the intestines affording lodgement to the *ova* of the worms, which, without the convenience of such a receptacle, will be more speedily discharged from the body.

## C H A P. XIV.

*Of Convulsions and the Epilepsy.*

**A**LL violent and involuntary motions of the muscles in children, are usually denominated convulsions, but as they seem more properly divided into convulsions and the epilepsy, we chuse to follow that distinction.

The delicate nerves of children render them extremely liable to convulsions from any violent irritation; and this symptom is the more alarming, as it generally supervenes in the last stage of every fatal disorder with which they are seized. Infants are chiefly subject to convulsions within the first and second month after birth, and again about the time of teething; though they are also exposed to them at other periods.

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The convulsive symptoms which often attack infants, soon after they are born, are distortions of the eyes, distortions or tremblings of the cheeks and lips, contractions of the tendons, startings and sudden shakings of the limbs, and frequently of the whole body.

The immediate cause of this disease is an inordinate motion of the animal spirits, proceeding, for the most part, from the irritation of acrid humours or worms in the bowels, or an inflammation of the gums in teething; though it appears to be sometimes produced by an acrimony in the serum of the blood.

When convulsions proceed only from some disorder in the stomach or intestines, they are usually cured without much difficulty; but when they are owing to a cause which cannot so easily be removed, they are attended with greater danger.

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For this reason, where they arise from teething, they sometimes prove mortal.

When the disorder proceeds from vitiated humours in the bowels, the cure is only to be effected by such medicines as correct their noxious acidity, and gently discharge them without encreasing the irritation of the nerves. In such cases I have found nothing so successful as *magnesia alba*, given every two hours, till the humours appear to be altered or expelled. A mixture of the testaceous powders and some gentle purgative may produce the same effect. Of the success of this practice Dr. Harris has given us a remarkable instance, in a girl who was scarcely a year old.

She was seized with the most violent and frequent convulsions that he ever remembered to have seen; and for several days before he was called, had her  
eyes,



eyes, lips, joints, nay her whole body, incessantly racked with them. She was at that time very pale, and of a hideous aspect; her belly was bound, or what little she voided by stool was very green. From the time when she had first been seized with the disorder, she had scarcely tasted any sort of meat, but was supported chiefly by cordials. This child, in such a desperate and deplorable condition, he cured, with the assistance of no other medicine, than a few ounces of crabs eyes mixed with crystals of tartar. Of this powder, he ordered a scruple, or more, to be given every hour in a spoonful of simple distilled water, such as penny-royal, and by repeated doses of it, the child fell at last in a kind of slumber, and was very much relieved from the convulsive paroxysms, till the crystals of tartar operating, the convulsions wholly disappeared.

While we are endeavouring to correct and expel the acid humours by the use of magnesia, or absorbents mixed with some gentle purgative, a glyster of milk, sugar, and salt, ought to be given, where the child is costive, and repeated in a few hours, till the belly be opened. This not only quickens the operation of the laxative medicine, but seems even somewhat to abate the disorder, by its mild and soothing warmth in the intestines. I have so often experienced its good effects, before the other remedies have produced any evacuation, that I never fail of advising it immediately on being called to a child in that disorder.

Convulsions are sometimes occasioned by acid humours irritating the stomach, in which case, the testaceous powders proving ineffectual, a gentle emetic should be given, of the antimonial wine,

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or a mixture of oxymel scillitic. and hyssop water, in the quantity of a spoonful every half hour, till a vomiting is excited.

When the convulsive motions were violent, I have often given, with success, two, three, or four grains of castor along with a dose of the absorbent powders. Nor have I ever experienced any thing more beneficial than these medicines, after trying all the various specifics so much applauded in this disease.

In children of a full habit, and in whom the convulsions have not been preceded by excessive purging, bleeding between the paroxysms, either with the lancet or leeches behind the ears, or in the arm, is frequently practised with great advantage. In the time of the paroxysm, however, bleeding is reputed dangerous, and indeed, in that

case, I have never used it; though I am not thoroughly convinced either of its danger or inutility, provided that, in such circumstances, we were able to determine whether the strength of the child could admit of the evacuation. For there is reason to think that the practice has been reprobated, rather on account of that uncertainty, than from any established observation that bleeding is absolutely deleterious.

Dr. Harris has disapproved of ever applying blisters in this disease, as they torture the poor infants already spent with convulsions, watching, and restlessness; but though these remedies may be unnecessary when the disorder proceeds from a collection of acrid humours in the bowels, we certainly often meet with cases in which they appear to be indicated. We know that in the small pox it is not unusual for children

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to be seized with convulsions before the eruption, when we can impute those symptoms to no other cause than the acrimony of the variolous infection. If, therefore, they are produced by one species of acrimony in the fluids, why may they not also by another? I am confirmed from experience, that in convulsions arising upon the retrocession of cuticular eruptions, the scald-head in children, or a stoppage of an habitual running behind the ears, they are of evident advantage. Where these symptoms, however, have not preceded the convulsions, blisters certainly ought not to be used till the medicines above recommended have proved ineffectual; since it is more prudent to begin the cure with such remedies as are adapted to the most general cause of the disorder, than with those that are not only seldom indicated, but at the same time painful in operation.

In some families convulsions are observed to be hereditary, and many of the children die of them at a certain period. For preventing these effects, it is usual to give the child, as soon as it is born, some antispasmodic medicine, such as a small quantity of the purest honey, a small spoonful of canary with sugar, or a little fresh oil of sweet almonds. Some, for the same purpose, give a single drop of the oil of amber, or half a spoonful of epileptic water. After the meconium is discharged, however, nothing is more effectual than the frequent use of magnesia alba or the testaceous powders, mixed with a few grains of rhubarb.

If the convulsions proceed from the irritation of worms in the bowels, we must endeavour to destroy and expel them by anthelmintic medicines and  
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rhubarb. But if the disorder is caused by teething, we ought to facilitate that operation of nature by the means already recommended.

## C H A P. XV.

*Of the Epilepsy.*

**T**HE Epilepsy is the most violent species of convulsions, and likewise the most dangerous. This disease, for the most part, seizes very unexpectedly, depriving the patient of all sense and understanding in a moment, and throwing him upon the ground. In this situation he gnashes with his teeth, his mouth foams, and he frequently shakes his head. The extremities, neck, and back, either become rigid, or are drawn into various distortions. During the paroxysm, some beat their breasts violently, while others stretch out their legs and arms with great force, tossing them, and sometimes their whole body, in a violent manner.

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In most of those who are seized with the epilepsy, the lower part of the chest, the hypochondria, and all the lower belly, are inflated. When these symptoms have continued for an indefinite time, they immediately cease, and the patient returns to his senses. Of these, however, there remains a torpor and dulness after the paroxysm, with a pain, and frequently a swimming of the head, and a dimness of sight.

In a person who has once had a fit of the epilepsy, the paroxysm commonly returns, sometimes at stated periods of the day, month or year, but it is generally most violent about the changes of the seasons, or the conjunctions or opposite aspects of the sun and moon. Sometimes the attacks are irregular, varying according to the return of some certain cause, upon which they depend. The paroxysms are also sometimes gentler, and of very

short duration, so that the patient scarce falls down, or loses his senses.

In this disease, the patient is sometimes forewarned of the approaching fit by certain symptoms, as a weight in the head, flashing of the eyes, or a tickling noise in the ears. Sometimes it is preceded by a cramp in some external part of the body, as the arms, legs, back, or hypochondria, from whence it ascends to the head, with the sensation of a cold blast of air.

The epilepsy is usually distinguished into the primary and symptomatic. The first is when the brain is immediately affected, and the other when it is drawn into sympathy with some other parts of the body.

In order to ascertain the morbid matter in this disease, Dr. Willis opened the

the bodies of several who had died of it. He could never discover the cause of it in the stomach or intestines; but in the heads of many he observed a collection of a serous liquor contained within the cavity below the cerebellum, and distending the membrane which covers the medulla oblongata, and compressing the origin of the nerves. In others not one apparent cause of the disease could be discovered.

The epilepsy sometimes goes off spontaneously, and sometimes by the help of medicine; but if it should not disappear before the patient is of the age of five and twenty, he is usually subject to paroxysms of it through the remaining part of his life. The age of puberty is the period at which it most generally ceases, when it continues beyond the years of infancy; but if the disorder be hereditary, it is seldom ever curable.

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The cure of the epilepsy is either palliative or radical; the former respecting the paroxysms, and the latter the intervals between them. The most effectual remedies in the fit, are spirit of hartshorn, tincture of castor, or the spirit or salt of amber. Anointing of the temples and nostrils with oil of amber, is likewise found to be of advantage; as is also a clyster, and the rubbing of the whole body for a considerable time together.

In order to prevent the return of the paroxysm when once it has ceased, such medicines must be given as are calculated to remove the cause of the disease. If therefore the fit is supposed to have been excited by vitiated humours in the bowels, or by worms, we must have recourse to anthelmintic medicines, or the evacuations already recommended in the cure of convulsions. When  
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the last of these methods of cure is to be pursued, I think it always advisable to begin first with a gentle emetic ; the day after the operation of which, if nothing forbid it, a little blood may be taken from the arm, or the hæmorrhoidal veins by leeches ; and on the succeeding day a purgative be administered. It has been usual in the treatment of this disease, to advise the evacuation of the *primæ viæ* to be made three or four days before the new and full moon ; and it would seem indeed from several observations, that regard ought to be had to the lunar periods : but if any symptoms appear of a collection of acrid humours, we are certainly not to postpone the evacuation, at whatever time it is indicated. For the evident existence of morbid matter affords stronger presumption for the return of the paroxysm, than, the contingency of lunar influence, which is found to be chiefly exerted in those

those cases where the disorder proceeds from a rarefaction of the fluids,

Various specific remedies have been recommended in the cure of the epilepsy, which it would now be superfluous to enumerate. The principal are castor, and the root of the wild valerian. The last of these mixed with the powder of Peruvian bark, is highly extolled by Dr. Mead, and I have known many instances of its efficacy. Unfortunately, however, almost all epileptic remedies being endued with a fetid taste, it is with the greatest difficulty that they can be administered to infants and young children; and we are, on that account, often obliged to sacrifice the radical to the palliative method of cure.

## C H A P. XVI.

*Of the Hooping Cough.*

**T**HE Hooping Cough is a complaint with which almost all children are seized once in their life, and which frequently lays the foundation of an infirm state of health ever after. The advancement of this disease through its earlier stage, is generally slow and gradual, resembling a common cold; but its severity increases with its duration, a flux of rheum is discharged from the eyes, nose, and mouth; the cough becomes more frequent, and the stomach being affected with sympathy, a vomiting ensues. Hitherto, however, the disease is neither dangerous nor difficult to be cured, and may continue in the same state for some weeks; but if it be so long neglected that  
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it encreases greatly in violence, it may in the end prove fatal. Respiration is then rendered difficult and laborious; the cough is almost incessant; the face assumes a flushed or livid appearance; blood often gushes from the nose, throat, or breast; a phthisis pulmonalis succeeds, which, with its concomitants a hectic fever, colliquative sweats, and a diarrhæa, put a period to the patient's life.

Various opinions have been maintained concerning the seat of this disease. Some have considered the stomach as the organ primarily affected; others have attributed the disease entirely to the lungs; and by others again its origin has been thought to be the larynx and pharynx, while some have ascribed it to a general relaxation and irritability of the constitution. That the stomach and lungs are each of them affected in this disease, seems to be clearly evinced, not only from the quantity



tity of phlegm which is discharged from both these organs, but likewise from the most successful method of cure, which is generally effected by the combined operation of pectoral and stomachic medicines.

Physicians have differed no less in regard to the treatment of the whooping-cough, than with respect to the seat of the disease, or the cause on which it depended. The propriety of bleeding, and the antiphlogistic method of cure, have been maintained by authors of the most respectable authority. Medicines which were held as specific have been no less warmly recommended. But modern practice has almost universally subscribed to the advantageous effects of the evacuations of the alimentary canal. Notwithstanding bleeding, however, be in general now disused, as either unnecessary or pernicious, it would be acting contrary

trary both to reason and experience, to deny its utility in all circumstances. For though it is evidently not adapted for removing the cause of the hooping-cough, and even tends to increase the quantity of phlegmatic humours which support the disease, yet when the patient is plethoric, or the fever high, and the cough so violent as to threaten a rupture of the pulmonary vessels, we must of necessity have recourse to the lancet, if we would save him from imminent destruction. To make use of bleeding, therefore, for preventing the dangerous effects of the disease, and not with a view of overcoming it, is the rule by which we ought to be governed in regard to phlebotomy.

The cure of the hooping-cough depends so much upon the evacuation of the phlegmatic humours, that unless these be discharged, the most approved pectoral remedies can never extirpate the  
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the disorder, especially in children of a gross habit of body, and in whom such humours abound. Of all evacuations an emetic is the most advantageous, as it not only most effectually cleanses the stomach, and attenuates the viscosity of the fluids by the action it excites, but also as it discharges the phlegm from the lungs more speedily than can be effected by any other medicine. The emetics I have used with most success are the antimonial wine, or a weak solution of emetic tartar, as has been recommended in the chapter on vomiting. These ought to be frequently repeated through the course of the disease, while there is no reason to suspect the formation of any fixt obstructions in the lungs. I have, with equal advantage, given the tartar emetic in the manner recommended by Dr. Fothergill in the Medical Observations, of which the following is the form:

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R Pulveris e chelis cancrorum semi-  
drachmam,  
Tartari emetici grana duo. Ac-  
curate misceantur.

The doctor advises, that one grain, one grain and a half, or two grains of this composition, be added to five or six grains of any testaceous powder, and given in a small spoonful of milk and water, in the forenoon between breakfast and dinner, to a child of a year old. If this quantity should not prove sufficient to excite vomiting, it ought to be so much increased next day as to produce that effect, and be daily repeated about the same hour.

Of the above antimonial powder, the doctor likewise orders half the former dose to be given, when the fever is vehement, in order to promote a diaphoresis; and on this method of cure he informs us that he chiefly depends, sel-  
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dom finding it necessary to bleed, or use any other kind of evacuation, unless to procure a stool or two daily. For this purpose, a proper dose of magnesia, given at bed-time, with the antimonial, generally answered his intention.

Next to vomiting, the evacuation by stool is of the greatest importance in this disease. For, though it does not contribute to discharge the pituitous humours from the lungs, yet, by cleansing the alimentary canal, it drains the source of the disease, and makes also an advantageous derivation from the upper parts to the intestinal glands. For this reason nothing more effectually relieves the head, which, on account of the difficulty of respiration and the violence of the cough, is generally attended with too great a repletion. Where magnesia keeps the body sufficiently open, the facility with which it is given to children renders

renders it justly preferable to other purgatives, especially when by the concomitant use of the tartar emetic, as above prescribed, the phlegmatic humours in the *prima via* are effectually resolved. If the stools were remarkably slimy, I have observed good effects from adding to the magnesia two or three grains of calomel. There is not, however, in my opinion, any purgative preferable to rhubarb, to which a little calomel is joined, as it assists in strengthening the relaxed tone of the bowels, which so much favours the continuance of the disease.

During the intervals of evacuation, if the breast be stuffed with phlegmatic humours, and the expectoration difficult, attenuating pectoral medicines ought to be prescribed. Of these the most proper is a solution of gum ammoniac or assafoetida; or the oxymel or vinegar of squills,

squills, given in such a manner as not to excite vomiting.

In such circumstances, diluting pectoral drinks are also to be frequently administered, to deterge the lungs and promote a more copious expectoration. Water sweetened with honey, or a light infusion of penny royal and liquorice, are extremely well adapted for this purpose. To these drinks, if the disorder should be accompanied by any considerable degree of fever, a little nitre ought to be added.

Nothing is now found to be more successful in the cure of the hooping-cough than the Peruvian bark, when proper evacuations have preceded its use. By its astringent quality it braces the digestive organs, and dissolves the viscidities of the humours by which the disease is supported. I have given it with success in

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all stages of the disorder, when the patient was free from a fever, and the expectoration was not laborious from the lungs being infarcted with viscid phlegm. In the London Medical Observations, Dr. Morrice advises it to be given along with castor, and relates several cases of his having administered it in that manner with great advantage when other methods of cure had failed. The dose he prescribes is fifteen grains of Peruvian bark, and eight grains of castor powdered, to be given in three spoonfuls of simple alexiterial water.

When the cough is partly owing to a spasmodic disposition, the joining of castor to the bark may probably be attended with advantage. I have generally prescribed it, however, along with a light infusion of Orange peel, to be taken twice or thrice a day when the circumstances permitted its use. We must  
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in the mean time be cautious not to give it so often as to increase the difficulty of respiration, or render the patient too costive; and rather to obviate these effects by pectoral medicines, and laxatives or clysters. I am certain that the early administration of the bark is of great consequence in preventing obstructions of the lungs, and hectic fevers, which frequently succeeds the whooping-cough when unsuccessfully treated; and the use of this remedy seems to be particularly indicated, when the coughing paroxysms, as is often the case, return at regular periods.

When the breathing is oppressed, or the child is hot and restless during the intervals of the cough, a blistering plaister should be applied between the shoulders; as also when an acrid serum appears to distill into the larynx or lungs, and irritate those parts.

If the disease runs out to a great length, issues or setons ought to be opened in some convenient part, to make a derivation of the humours from the breast; and I have observed this method to be attended with remarkable advantage where there was reason to suspect that obstructions were formed in the lungs.

When the paroxysms of the cough are violent and of long duration, it is necessary to have recourse to opiates. Huxham, for this purpose, recommends the *elixir asthmaticum*; and as it is an anodyne which rather promotes than obstructs expectoration, it seems justly to merit the preference.

When the disorder has continued some weeks, and its violence is at length abated, if there still remains a difficulty of breathing, with a short dry cough, there

is room for suspecting that obstructions are formed in the lungs. In this case the method of cure which had hitherto been pursued, required to be considerably varied. Emetics are now to be withheld, and, if the pulse be quick and full, a little blood must be taken away occasionally, to prevent an inflammation. Gently deobstruent medicines are also to be administered; such as an expression of millepedes, the saline draughts, &c. Issues and setons are of great advantage in this termination of the disease, and ought to be kept open throughout the whole process of the cure. I have often found it of benefit to give a few grains of calomel at bed-time, which was not carried off till the second morning after, by a little magna, or crystals of tartar. An infusion of ground-ivy, with liquorice or honey, makes a suitable drink in this case, and the diet ought to consist chiefly of milk, of which that of asses is preferable.

## C H A P. XVII.

*Of the Croup, or Suffocatio Stridula.*

**T**HIS is a disease which I have never had any opportunity of seeing, and can therefore say nothing concerning it from my own experience. But as it has been learnedly treated of by Dr. Home, professor of medicine in the university of Edinburgh, I shall here give a general account of it, as delivered by that ingenious author.

Dr. Home informs us, that this disease happens, or at least is observed, so seldom in Edinburgh, that very few cases of it occur to any particular person, during the course of a whole lifetime, and that to have the power of seeing more, a physician must put himself



self in the way of intelligence, especially at places situated on the coast. By that means he has had an opportunity of attending more patients who were ill of the croup, than otherwise would have fallen to the share of any one of the profession.

According to the observation of the above ingenious gentleman this disease is peculiar to children; and they are more liable to be seized with it soon after their being weaned, than at any other time. On the breast, they are either less subject to it; or, which is not improbable, as they cannot tell their complaints, it is mistaken for some other disease. He never saw, or heard of one, above twelve years of age, affected by it.

This disease is supposed to have a local situation, and to be very seldom

found at any great distance from the sea-shore. It appears much less in Edinburgh than in Leith, or Musselburgh. It is often seen along the coast of Fife; and is said to be very common in the maritime parts of Airshire and Galloway. Very wet and marshy situations are sometimes known to produce it.

The symptoms attending the croup are chiefly the following. A peculiar sharp shrill voice, not easily described; a quick laborious breathing; a frequent pulse, sometimes strong at first, but always soft and weak towards the end; a dull pain often, and sometimes an external swelling in the upper part of the trachea.

In the croup, there is sometimes a remarkable freedom from all complaints, even when the patients are in imminent danger,

danger, so that they will eat a minute before they expire. There is scarce any difficulty of deglutition, or remarkable inflammation in the *fauces*. A cough is not always present, but when that symptom accompanies the disease, it is not of the common kind, but more short and stifled, and less convulsive, with little or no expectoration.

Other symptoms often attend this disease, such as a red swelled face, oedematous feet, drought, urine sometimes with, and, at other times, without a sediment, reachings, &c. But these are not so constant as the former, and therefore not so characteristic.

As this disease appears peculiar to a certain age, and in a great measure local in respect to its influence, so it seems particularly to attend certain seasons of the year. The several cases pro-

duced by Dr. Home, shewed themselves during the course of the winter, from the month of October to the month of March; except one in August, which he thinks might be owing to the antecedent small-pox. In general, the moist and cold weather in winter seems to have great power in producing it.

Different opinions have been formed in regard to the seat of the *suffocatio fridula*. Some placing it in the *glottis* and its muscles; some in the coats of the *trachea*; and others in the lungs themselves. None of these opinions, however, appear to be well founded. The *glottis* is never found contracted or inflamed; the lungs are quite sound; and the coats of the *trachea* seem to suffer only in a secondary manner.

The seat of the distemper, according to the dissections, and observations made by



by Dr. Home, appears to be the cavity of the wind-pipe. The place first, and most particularly, affected, is the upper part of the *trachea*, about an inch below the *glottis*; for in that part the children complain of a dull pain; the external swelling has been observed there, and a morbid membrane has been found stretched from that place downwards. The back part of the *trachea* where there are no cartilages, seems, from the inspection of those who have died of this disease, to be its first principal seat; as the morbid membrane is often found there, when it is in no other part.

Various opinions have been entertained relative to the cause of the croup, by people who had not accurately examined the symptoms of the disease. Some have attributed it to spasms of the muscles that contract the *glottis*. But were the croup of the class of spasmodic ner-

vous diseases, it is alledged that it would have seized the patients by paroxysms, with a remission and exacerbation; the urine would always have been pale, convulsions would have come on before death; and antispasmodics, instead of evacuants, would have been the remedies.

Had the muscles or any of the coats of the *trachea* been inflamed or mortified, as others have thought, the pain would have been greater than was observed, before the mortification; and the pulse have been stronger than it generally is, as the parts are membranous.

If, according to the opinion of many, the lungs had been inflamed and suppurated, the cough would have been more incessant and violent; the pulse full and soft; with a sensation of weight in the breast, fizy blood, dry tongue, and delirium.

In opposition to all these opinions, it appears, as Dr. Home contends, from the dissection of those who died of the croup, that the real cause of the disease is a preternatural white, tough, thick membranous crust, covering, often for many inches, the inside of the *trachea*. This membrane is of so tenacious a consistency, that it can remain soaking in warm water, for many days, without dissolving. It is not attached to the parts below, but is easily separated from them, as there is always matter behind it. How this matter is formed, Dr. Home has ingeniously attempted to explain; but it is sufficient to observe in general, that he imagines it to be produced from an inspissation of the glandular *mucus*.

From the symptoms which the author observed in different patients, he concludes that there are two distinct situations

tions of the *suffocatio stridula*; the one more inflammatory, and less dangerous; the other less inflammatory, and highly dangerous. In the former, the pulse is generally strong; the face red; drought great; and the patients bear evacuations. In the latter, the pulse is very quick, and soft; there is great weakness; the tongue is moist; there is less drought; great anxiety, and evacuations hasten death. The former may be called the inflammatory; and the latter the purulent state.

Dr. Home observes, that these two different stages of the disease must be carefully distinguished by the physician, that he may know how to direct his applications; or, at least, how to form a just prognostic; as he is generally not called till the patient is in the latter stage. If the distemper come on with an old habitual cough, or by slow degrees,



degrees, the inflammatory stage will scarcely be perceivable.

If the pulse be very soft and feeble, especially after being strong; or any purulent matter comes up with the spitting, vomiting, or coughing, which was sometimes observed to happen, it is a proof that the purulent state is already formed. The doctor also learned from experience, another mark by which to distinguish these different states. He observed that the urine, which, during the inflammatory state, is thin, had always, after the purulent state came on, a light ouzy purulent sediment, such as generally accompanies an internal collection of matter, that has no vent outwards.

The learned author justly pronounces this disease to be extremely dangerous, and the more so, as it is silent in its progress,

progress, and gives no perceptible alarm, till death is near at hand. The first stage of the disease often passes unobserved; and, before we are certain of its existence, is beyond all remedy.

If the physician be not called till the third or fourth day; if the breathing appears much affected, the pulse quick and weak, the face red, great anxiety, and frequent tossing, the danger is great and pressing. But if he sees the patient the first or second day of the disease; if the breathing is not very difficult; the pulse, though frequent, be strong and firm, and more especially if the voice is altered only in its greater exertions of crying or coughing, and continues more natural in its common state, there is reason to entertain hopes of a recovery. The first sign of safety, usually, is the cough becoming stronger and less dry, with that peculiar sound which

which attends moistened lungs. For this shews that the membrane is not formed, or is already dissolved, and that the inflammatory state is abated.

The situation seems very desperate, when the membrane is once formed, and the lungs filled with matter. In the latter case, the patient is soon suffocated.

It appears from some of the cases which the doctor has related, that the preternatural membrane alone is sufficient to kill the patient; as there was but little matter found in the lungs of some of those who died of the disease.

From observing the effects of the different applications which have been made use of in this disorder, the author deduces some general rules with regard to practice. He observes that, in the inflam-

inflammatory state, bleeding appears to have been attended with immediate good effects. That this ought to be done expeditiously and plentifully, while the pulse will admit of it. That it is best to take blood at first with the lancet, so that a sufficient quantity may soon be drawn off; and afterwards by leeches, applied to the upper and fore part of the throat.

He next advises to keep the patient's belly constantly loose, by such medicines as children will take; cautioning us to be very attentive not to let them cry, as that might prove the means of immediate suffocation. He generally used for this purpose, tablets of magnesia alba, made palatable with sugar.

He gives it as his opinion, that blisters, applied round the neck, after the vessels are well emptied, do great service.



vice. But that they seem to do none, when applied before this time; nay, if the state be very inflammatory, must do much hurt, from their violent *stimulus* on the vessels. Further, that emollient fomentations and cataplasms, applied round the neck, are of considerable benefit, and keep up a local evacuation.

He also observed, that the resolvent and gently stimulating steams of warm water and vinegar, drawn in with the breath, seemed always to have an immediate good effect.

Vomits had been often given, and were generally thought to be of use; but Dr. Home informs us, that he never saw any advantage arising from them. He rather suspected that they must be frequently pernicious, as they increase the secretion of *mucus* in the lungs, without expelling it, which is the very circum-

circumstance that, if possible, we ought to guard against.

In regard to sudorifics, he tells us, that some have thought them to be of service; but that he cannot say he ever saw any great advantage from them.

The purulent state of this disease appears wholly to have resisted the application of medicines. Vomits did not discharge the matter from the lungs, though they were given with that intention. Endeavours to excite a cough, by the means of effluvia, or steams inspired into the lungs, proved also ineffectual. For the membrane which covers the *trachea*, and the *mucus* or matter which at that time is spread over the lungs, render these parts insensible to any external irritation.

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Knowing no means of effecting either the solution or expulsion of the preternatural membrane, when it is once completely formed and consolidated, the doctor puts the question, whether, in such a desperate case, it would not be adviseable to try the operation of bronchotomy, as the membrane can be so easily got at, and is very loose.

This is the substance of Dr. Home's treatise on the croup. As neither I myself, nor any physician with whom I am acquainted, ever met with the disease, I cannot make any supplement to the observations he has offered to the public; and shall therefore only add, that some others, considering it not as an inflammatory, but a spasmodic disorder, say that they treated it successfully by antispasmodic medicines.

## C H A P. XVIII.

*Of the Scrophula, or King's Evil.*

NO disease whatever has been accounted for upon a more erroneous principle, or more engaged the superstitious veneration of mankind in regard to the cure, than the scrophula. An acidity of the serum of the blood, which never was discovered, and a physical virtue in the touch of hereditary kings, which no human prince ever possessed, have been respectively considered as the cause, and sovereign remedy of this evil. A more rational philosophy, however, has exploded both these visionary notions, which owed their origin only to the suggestions of crude speculation, and political artifice. It would be foreign to our purpose to enquire into  
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the means by which this ridiculous pretension of particular royal families was so long supported in several of the nations of Europe. But the certainty of the fact is sufficient to justify no inconsiderable degree of scepticism in regard to the real efficacy even of medicines, the most highly extolled in the ages of credulity and ignorance.

The scrophula is a tumour arising from a viscosity of the serum of the blood, and which may affect the various parts of the body, but chiefly seizes the glands. Of all diseases, it is one of the most hereditary, and in several countries endemial. People who live in a thin and sharp, or very thick and foggy air, and who use a salt, crude, or viscid diet, are the most obnoxious to its influence. It often accompanies the rickets, and succeeds other disorders, which have been imperfectly cured, and left their dregs

dregs in the body. A sedentary life, with long-continued grief, or habitual depression of mind, may also be ranked among its procatactic causes.

When errors in the non-naturals have so long exerted their influence as to produce a disposition to the scrophula, the disease is often excited by slight external accidents, such as blows, bruises, compressions, &c. Wiseman relates an extraordinary case of a struma produced by the last mentioned cause, in a cook's servant in the *Old Bailey*; who by sleeping one night on a form with his head reclined over it, his neck was so compressed by the end of the bench, that when he awaked, it was full of scrophulous tumours on both sides, some of which were as large as walnuts; and though all means were used that could be thought of by the ablest physicians and surgeons for his relief, yet in a few days

days the tumours apostumated, becoming virulent ulcers, and he died tabid within half a year after.

The same effect has been observed to follow from the use of too tight stays, which, by exciting a pain of the breast, have occasioned scrophulous tumours of the axillæ. For it is remarkable, that the disease is not always produced in the part on which the operation of the external cause has been immediately exerted. Strains of the joints, such as the knee, ancle, &c. have frequently given rise to glandular tumours in the neck; and in people of a cachectic habit, a sore leg has occasioned the same sort of tumours in the groins.

The glands are so much the principal seat of the scrophula, that some authors have confined the disease entirely to these parts. Of the external glands, those of the

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neck

neck are for the most part chiefly affected; but in general, the commencement of the struma seems to take place in the internal glands, especially those of the mesentery. Upon the dissection of many children, in whom the external signs of the scrophula were not fully visible, the glands of the mesentery have generally been found obstructed; and wherever the disorder has appeared outwardly, the state of those parts is seldom or never found.

The conglobate glands are in general more liable to strumous swellings than those which are called conglomerate, though sometimes both are affected. In some cases, where the conglobate glands of the neck are swelled, and many of them press hard upon, and even between the salivals, yet the latter remain entirely sound. In the same manner the pancreas and thymus have been surrounded with  
struma,



struma, while themselves continued to be perfectly free from the disorder.

The conglomerate glands, however, sometimes labour under the struma without the participation of the conglobate. Of this we have an instance in the ranula, a tumour of the glandula salivalis inferior. The parotis also, or external salival gland, is frequently subject to the same disease. And Dr. Needham informs us, that he had seen a strumous tumour suppurated in the pancreas, which contained a pint of matter, whilst the glands of the mesentery remained quite unaffected.

The breast, the tonsils, and the lachrymal glands, are very often subject to the scrophula; of which the ophthalmia is likewise a frequent consequence.

The glands which are dispersed in the interstices of the muscles over all the ex-

ternal parts of the body, are also not exempted from this disorder. Large strumæ are frequently observed in the abdominal *vijcera*; and Dr. Needham had seen a scrophulous swelling hang from the *apex* of the heart, that weighed two ounces. A gumminess and collection of strumous matter also sometimes involves the tendons, especially those of the hands and feet, with the elbows, knees, and ancles.

Even the bones, whose hardness might be imagined to render them less susceptible of this disorder, are as often found affected with the scrophula as any other part except the glands. When the strumous matter touches the external part of a bone, its surface is frequently rendered carious. In general, however, when the bones are affected with this disease, the external, or cortical part, though swelled, appears still to be hard, whilst

whilst its substance within is found entirely putrid and rotten. This species of tumour is sometimes termed the *spina ventosa*.

As the appearance of scrophulous tumours is extremely variable, both in point of shape and the manner of their progress, the diagnostic signs they afford are liable to great uncertainty, and the best characteristic of the nature of the incipient disease is often the constitution of the patient. In general, however, when the struma affects a conglobate gland, the tumour is round, indolent, moderately hard, and moveable. When a conglomerate gland is the seat of the disease, the shape of the swelling is usually determined by that of the part, especially if the whole gland be affected. But as these lesser glands, or kernels, are often only partially diseased, the shape which they assume in a morbid state, is for

the most part extremely indeterminate. In a muscle the shape is likewise accidental, as well as the hardness, though the tumours of a round figure are commonly reckoned the most benign.—When the lip is affected with the scrophula, it generally becomes thick and chopt.

For ascertaining with greater certainty the nature of such tumours as appear to be scrophulous, it is of consequence to examine the state of the mesentery, which, as has been above observed, is generally first affected, where the habit is inclined to the disease. This is most conveniently done by laying the patient in a supine posture, when, if he is not pretty fat, and the tumours are of a considerable size, they may sometimes be felt by moving the hand along the belly.

After all, the most certain criterion of the scrophula must be taken from the  
con-



constitution of the patient; and if he be found either to have any hereditary title to the disease, or to be accustomed to such a course of the non-naturals as favours its production, the appearance of the tumours, especially in glandular parts, affords room for suspecting that the disorder is of a strumous kind.

In forming a prognostic of scrophulous disorders, particular regard must be had to the age and constitution of the patient, as upon these circumstances the event in a great measure depends. We ought also to take into consideration the seat and condition of the tumours; as whether or not they are near great vessels, joints, nerves, tendons, or bones; whether they be few or many, great or small, deep, or superficial, moveable or immoveable, soft or hard, benign or malignant.

If the habit of body be tolerably good, the patient young, the strumæ recent, superficial, and not very hard, the resolution or suppuration of them may be successfully accomplished; but if they have been of long continuance, are hard, and lie deep among the vessels, it is difficult for art to produce either of these terminations; and if ever they are effected, it is generally owing to a fortuitous operation of nature, which has often been observed to happen about the age of puberty, at which time the constitution seems to undergo a considerable change.

When a scrophulous tumour is moveable and not attached to any large blood-vessel, it may be removed by extirpation. This method of cure, however, would still be ineffectual where the habit of body was bad, as, in such a state, the tumour would be apt to break forth in other parts.

In

In the cure of the scrophula, it is proper to begin with a gentle vomit, where no concomitant symptom forbids its use; for in those of a strumous disposition the stomach is generally loaded with viscid humours, which conduce to the augmentation of the disease. After the emetic a purge of rhubarb should be prescribed, with which some calomel is mixed; and this may be repeated once in the fortnight, or occasionally, during the cure.

Calomel, administered as an alterative, is likewise highly advantageous in the scrophula; as are also the preparations of antimony. By these medicines I have frequently known the glandular tumours resolved, even when they were of a considerable hardness.

Of late years the Peruvian bark has been much recommended in the cure of

this disease; and in such tumours as depended upon a viscidty of the fluids, and were not the consequence of any external accident, I have in many cases advised it with great success. It is most beneficial, however, when given in the incipient state of strumous swellings; for if they have attained a great degree of induration, the use of it may be somewhat suspected.

The medicinal course ought to be persisted in for several weeks, or even months together, especially the mercurial and antimonial preparations; but where the bark is administered, it is proper to suspend the use of it for two or three weeks occasionally, to prevent its becoming habitual and necessary to the constitution.

When medicines fail of resolving serophulous tumours, or these have terminated



minated in ulcers of a cancerous disposition, nothing is more effectual than drinking of the Moffat waters, a spaw in Scotland celebrated for its extraordinary virtues in this disease.

The resolution, or suppuration of scrophulous tumours is assisted by the same topical applications which are used in other swellings.

The air most suitable for scrophulous patients in general, is that which is warm and dry. The diet ought to consist of light animal food, and the drink to be such as is most free from viscosity; of which kind nothing is better adapted to the disease than the decoction of the woods.

## C H A P. XIX.

*Of the Rickets.*

**T**OO much perhaps has been insisted on the primitive vigour of mankind, from the reputed longevity of the ancients; and yet nothing more strongly confirms that doctrine than the disease of which we are now to treat. It may justly appear surprising, however, that a disorder, not contagious, and which is supposed to depend in a great measure on parental imbecillity, should have been so late of breaking forth as the beginning of the seventeenth century. Were the rickets the entail of an enervated race, or the production of a humid atmosphere, as is generally imagined, what reason can be assigned for

for its not invading either the luxurious states of ancient times, or countries that have been perpetually exposed to the influence of a moist and unwholesome air? It cannot fairly be alledged that such a gradual degeneracy of constitution, as required the succession of so many ages to accomplish, was necessary to excite the disease, when we often see it attack children whose parents were vigorous and healthy. The accuracy of the ancient physicians in describing diseases, will not permit the supposition that the rickets actually existed before the epoch to which Glisson has fixed its original appearance; yet, should we abandon that conjecture, we must admit a degeneracy unknown in all former ages. This observation, it must be owned, affords too much reason for imputing the disease to the pernicious influence of some of the articles of diet which modern luxury has introduced. Of that

that subject; however, at present, I shall not enter into any discussion.

According to Dr. Glisson, the rickets first appeared about the year 1620, in the west of England, viz. in the counties of Dorset and Somerset. It afterwards spread gradually to London, Canterbury, and Oxford, and almost all the southern and western parts of the kingdom. But in the time of that author, it so rarely happened in the northern counties, that it was hardly well known. The same Dr. Glisson, who was particularly industrious in searching for the cause of this new disease, has left us many accurate anatomical observations, made on the bodies of those who had died of it; the principal of which, as they are of importance towards elucidating the nature of the disorder, I shall here enumerate.

The



The head was uncommonly large, and the face more full than natural, in respect to the other parts of the body.

The limbs and muscles were slender and emaciated, as if the patient had an atrophy or consumption.

The skin, with the *membrana adiposa*, were quite flaccid, and, as it were, detached from the parts they covered.

About the joints, especially the wrists and ancles, there were observed certain bony protuberances, which had their seat chiefly in the epiphyses of the bones.

The breast was flat and very narrow, especially under the arm-pits, and, as it were, compressed on the sides; while the sternum rose a little prominent, like the breast of a fowl, or the keel of a ship.

The extremities of the ribs, where they articulated with the cartilages of the sternum, were knotty, in the same manner as the wrists and ancles.

The abdomen, with respect to the containing parts, was thin; but in regard to its contents, prominent, and somewhat tumid.

The joints, and whole body were not near so rigid as those of others, after death, and the neck, in particular, scarce grew stiff at all.

When the belly was laid open, the liver appeared of a preternatural size, but of a good enough colour, and was sound.

The spleen, for the most part, presented nothing remarkable to the view.

A collection of watry serum was sometimes found in the cavity of the abdomen, but neither often, nor in any great quantity.

The stomach and intestines were generally more distended with wind, in those who died of this disease, than in others.

The mesentery was sometimes found, and sometimes its glands were swelled, if not strumous.

The kidneys, ureters, and bladder, were in a natural condition, unless the patient had laboured under some other distemper. But it was observed, in general, that the abdominal viscera were rather larger than ordinary, in those who died of the rickets.

In

In all the rickety persons that Dr. Glisson dissected, the lungs always adhered, more or less, to the pleura.

Infarctions of the lungs were no less frequent, especially in those places where they adhered to the pleura; as also large hard tumours, full of thick blackish blood, sometimes in one lobe, sometimes in more; but these were not always observed. Abscesses were likewise frequent, as well as the empyema.

Collections of water were found more frequently in the cavity of the thorax than in the abdomen, in rickety children, but not in all of them.

Upon opening the cranium, the first thing observable was, that the dura mater was more firmly attached to it, than in adults.

Between



Between the dura and pia mater, and in the ventricles of the brain, were found collections of serum, in some who were dissected, while no morbid appearance was discovered within the cranium in others.

The internal carotid arteries, as also the jugular veins, were larger than their due proportion, while the veins and arteries distributed to the external parts of the head, were considerably less capacious than in others.

From all the observations above enumerated, considered both in a separate and collective view, it would appear that the fundamental cause of the rickets is a general weakness of the body, by which digestion and nutrition are totally depraved; while parts which are most exposed to distention are preternaturally enlarged, and those which are chiefly liable

liable to pressure are thrust forth into protuberances and distortions of various forms.

The rickets are either transmitted from the parents to their children, or proceed from errors in the non-naturals during the earliest stages of life.

It is observed that people of a cold phlegmatic constitution, and who use a sedentary and inactive life, as also those who have been long afflicted with any emaciating distemper, such as the lues venerea, consumption, fluor albus, or dysentery, are most apt to beget rickety children. An immoderate use of venery during the time of pregnancy, or the indulging too much indolence in the same state, are likewise imagined to be productive of this disease.

When the rickets are not hereditary, the disorder is for the most part attributed

buted to a violence done to the tender bones of infants, while they are in a cartilaginous state, either by pressure or swathing too tightly, whereby the body is distorted, and the growth of it rendered unequal in the different parts. The disease may also be produced mechanically, by accustoming the child too much to one posture, and neglecting the use of proper motion. Suffering the child to remain long wet, is another article of mismanagement, supposed to be extremely prejudicial, as it not only checks the perspiration, but relaxes the whole habit. For the same reason, too frequent bathing in warm water is justly reckoned injurious.

The more remote causes of the rickets are a cold and moist, or warm and relaxing atmosphere; crude, viscid diet, spirituous liquors, excess or defect of motion, watching, and sleep; and in  
general

general whatever weakens the body, and produces indigestion.

The period at which the rickets make their appearance is generally more determinate than the invasion of any other disease. From nine months old to two years and a half, is the time when they are observed to be most frequent. When the disorder is hereditary, however, it is sometimes sooner perceptible; and I have often known it to invade beyond the period abovementioned.

The signs of the rickets may partly be anticipated, from the account already given of the dissection of such as had died of the disease; but in order to exhibit a full representation of its effects, it will be necessary to describe it more minutely.



At the beginning of the disease the child is seized with an universal indolence. The flesh becomes soft and flaccid, and the joints so feeble that voluntary motion is performed with the greatest difficulty. Dull, sickly and languid, the patient scarce can sit tolerably erect; but even whilst at play, has a perpetual inclination to sit or lie. His countenance acquires a severity disproportioned to his tender age; and, if he has learnt to speak, he discovers a surprising sagacity. In this disease, as has already been observed, the head enlarges much beyond a just proportion, the face becomes likewise fuller, and of a florid complexion, all the muscular parts below are gradually extenuated, and the belly increases in prominence. The disorder at length invades the bones, and excites protuberances in their extremities. The radius and ulna, the tibia and fibula, and sometimes the os femoris

ris and humeri, become distorted. The os frontis grows protuberant, especially between the eye brows. The teeth advance slowly, and with difficulty; or if the child has already got them, they become loose, carious, and drop out; nor are they easily succeeded by others. The thorax acquires the figure above described; a cough frequently supervenes, with difficulty of breathing; and the patient is seldom able to lie alike easy on both sides. The appetite is moderate, or rather weak; the pulse is low and languid, except when he is feverish; and when paroxysms of that kind happen often, they generally terminate in a hectic fever, which proves fatal.

When the disorder is hereditary, it is always most difficult to cure; and when it has been occasioned by any antecedent distemper, it is likewise more dangerous

gerous than if produced by an error in the manner of living.

The sooner a child is seized with the rickets the consequence is the more to be apprehended, on account of the proportionable weakness of the constitution, and the longer period in which the disease may advance.

The danger of the disorder is in general to be estimated by the violence of the symptoms. Thus, the more the child is emaciated, the more enormous the size of the head, the greater the protuberances of the joints, the more considerable the distortion of the bones and the weakness of the spine, the greater is the danger of the disease. A difficulty of teething, and breathing, is also accounted dangerous.

The incurvation of the bones is hard to be cured in those who draw up their limbs, and will not suffer them to be extended. And if the bones of the legs and thighs encrease for a considerable time rather in thickness than length, the children generally remain dwarfs.

A dropfy of the lungs, and an ascites, or an hectic fever, are signs of the utmost danger. When complicated with the scurvy, the cure of the rickets becomes exceedingly troublesome; when with the venereal disease, it almost surpasses the power of medicine.

Eruptions of the skin are imagined to be a favourable symptom.

Those who are not perfectly cured before they are five years of age, are for the most part sickly and valetudinary ever after; and either die of an asthma, cachexy,



cachexy, or consumption, in a few years, or become hump-backed, dwarfish, and deformed.

As it appears from what has been above delivered, concerning the nature and symptoms of this disease, that it not only destroys the form and proportion of the most solid parts of the body, but likewise produces a vitiated state of the fluids, with consequent obstructions of the *viscera*, it is necessary towards extirpating the disorder, that we have recourse to such means as are adapted to the radical alteration of a cachectic habit. For this reason, though many of the symptoms attending the rickets demand the aid of external and mechanical applications, the source of the disease, especially when it has diffused its influence through the whole constitution, must be drained by the use of medicines taken internally. The first

step in the method of cure, therefore, is to cleanse the *primæ viæ*, which in this case are generally loaded with crude and impure humours. To answer this intention, Sydenham advises the frequent use of an infusion of rhubarb. But where an emetic can be given with safety, it certainly ought always to be premised; as it not only cleanses the stomach more effectually than any purgative, but by the repeated concussions occasioned in the action of vomiting, the viscid humours are attenuated, and obstructions resolved, at the same time that all the secretions are greatly encreased. A few grains of ipecacuanha, proportioned to the circumstances of the child, is the fittest for this purpose.

A course of gentle purgatives is next to be entered upon, which ought to be frequently repeated in moderate doses. No kind is here preferable to rhubarb, when

when the child can be induced to take it, as it both evacuates and strengthens the bowels. By this purgative alone, without the assistance of any other internal remedy, I have in a short time effectually removed the disease, even where it had proceeded to a very considerable height. Its effects were particularly conspicuous in gradually reducing the prominence of the abdomen, which I consider as the local complaint of most essential consequence in this disease. Nor have I ever observed the extenuation of the body to be increased by this gentle evacuating course; but on the contrary, an equable nutrition of all the parts was promoted, in proportion as the humours, collected in the bowels, were discharged. To render the rhubarb more effectual, I have sometimes joined with it two or three grains of calomel. When rhubarb cannot be taken, on account of its disagreeable taste,

taste, or is not retained in the stomach, we must substitute in the room of it some other purgative of the most gentle kind; such as manna, or crystals of tartar. For all violent cathartics are highly improper in a disorder attended with so great and universal relaxation.

Though it has been said above, that purgatives are to be given in order to cleanse the *prima via*, we ought by no means to lay aside the use of them as soon as that end is accomplished, especially if the belly be remarkably prominent. For as this symptom is always accompanied by a collection of viscid humours, as well as an unnatural enlargement of some of the abdominal *viscera*, the use of gentle evacuations continues still to be necessary, and the intestinal tube is the most proper channel by which such humours can be discharged. When there is reason to conclude,



clude, however, that the *prima viæ* are pretty well cleansed, and a derivation of feculent humours from the *viscera* becomes the principal object of attention, the dose of the purgative may be somewhat diminished, as the bowels, in such a state, will be more easily stimulated than formerly.

When we have arrived at this stage of the cure, it is usual to prescribe such medicines as attenuate the viscid fluids, and render them more fit for evacuation. But in prosecuting this plan, it is necessary that we have regard to the particular state of the patient. All medicines of that class are endowed with more or less of a stimulating quality, which renders the use of them suspicious when the patient discovers any tendency to a hectic fever; though even in that case I have sometimes known them to be administered with advantage. For

instance, where there was ground to imagine that the fluids were tainted with acrimony. This, it may be alledged, is always in some degree the attendant of a hectic disposition. I have more than once, however, seen the feverishness increased by the indiscriminate use of these preparative medicines, as they are called. Whenever such an effect is observed, we certainly ought, if not entirely to withhold them, at least to give them more diluted, and mixed with ingredients of a balsamic nature. The most common preparative in use, is an infusion of sarsaparilla, or sassaparilla; and these are undoubtedly of advantage where the humours are viscid, or partake of a saline acrimony. If they should be found to quicken the pulse, some shavings of hartshorn may be joined with them, and I think that some raisins, in decoction, are likewise very properly added; as they not only make,

make the draught more palatable, but assist in evacuating the humours, by a diuretic quality.

Though such medicines as the above-mentioned are frequently used in practice, I have seldom observed any recourse to them necessary where the disorder was not greatly advanced. It for the most part yielded in a short time, to purges of rhubarb, and the cold bath.

After evacuations, the cold bath is the most excellent of all the remedies recommended in this disease. The most proper season for using it is the summer months; but I never hesitated to prescribe it at any time when the weather was not frosty, provided that the patient appeared strong enough to endure it. After using it the child ought to be immediately well dried, and put to bed, where he may remain for an hour or  
K 5 longer,

longer, to encourage perspiration, and then be shifted. Nothing can exceed this remedy in altering a rickety constitution; and I am persuaded that were the practice general, of accustoming children to the cold bath at an early period, the disease would rarely ever appear, if not be entirely prevented.

Dry frictions of the whole body, especially the parts affected, are likewise highly serviceable in this disorder, and ought to be made with a warm cloth. After which it is of advantage to anoint the weakened or distorted parts, and the spine, with some warm attenuating liniment, such as the following:

R Ung. nervin.

Ol. palmæ ana unc. unam

Caryophyl.

Succin. ana guttas viginti

Sp. Lavenduli comp. unc. unam.

Misce.

This



This liniment should be applied once or twice a day, and seems preferable to plaisters, which are used by some for the same intention.

Issues made by incision between the second and third vertebræ of the neck, are said to have done service in this disease, without any other assistance. But the trouble attending that remedy renders recourse to it ineligible; though, when the head is greatly enlarged, and threatens a hydrocephalus, issues are undoubtedly indicated.

A practice was formerly much used by empirics, of scarifying the ears, which was performed with a blunt knife, in the hollow or concha of the ear, and repeated twice or thrice, intermitting seven or eight days between each scarification. Even Dr. Glisson was of opinion that this method might be

serviceable in children of a full habit, in consequence of the bleeding it occasioned. But if such an evacuation were judged proper, it certainly might be made in a way more regular, less painful, and equally advantageous.

Mechanical expedients, such as bandages, jonks, and clasped boots, are highly useful in this disease, both by preventing the weakened limbs from distortion, and recovering them from that state. A verbal description of such machines, however, neither is necessary, nor would be intelligible. It is sufficient to observe that they ought to compress the convex or protuberant part of the bone, but not the hollow side, which they should rather defend from compression. That they ought also to be as neatly adapted to the bone as possible, and always allow a free motion to the joint.

Injunc-

Injunctions, otherwise missing, become of real importance with respect to the management of children in this disease. Of this kind are the posture of the body, and the motion of particular parts. When a child is distorted to one side, the best method of cure is, to make him frequently incline to the opposite. Or if one shoulder be lower than the other, he should be caused to elevate it pretty often. By such simple directions as these, when followed in time, the effects of the disorder are counteracted, and a growing deformity soon removed.

The rickets frequently render children liable to other symptomatic complaints, which, as they farther weaken the body, and thereby increase the morbid disposition, we must endeavour to palliate, before a complete cure of the original disease can be effected. The prin-

principal of these are a diarrhæa, profuse sweats, and difficulty of teething.

A diarrhæa in rickety children may proceed from one or other of the following causes, namely, a foulness of the intestines, weakness, or obstructions.

When the intestines are loaded with viscid and acrid matter, they are naturally stimulated to more frequent excretions, till the cause of the evacuation is removed.—When the tone of their fibres is debilitated, the vessels which open into their cavity discharge a greater quantity of fluids than ought to be secreted in a sound state.—And lastly, when obstructions have taken place, both the secretion and absorption in the intestines are rendered extremely irregular.

When a moderate diarrhæa succeeds the rickets soon after their commencement,



ment, it may be reckoned rather salutary than prejudicial, by evacuating the morbid humours which had been collected in the body. But if it supervenes in an advanced stage of the disease, and especially if attended with great tumour and hardness of the abdomen, the prognostic is much more dangerous. At whatever period of the disease, however, the looseness happens, it ought not to be too much restrained, provided that the patient can bear it. For though I never have observed it to be critical, it prevents the augmentation of the obstructions, and evidently co-operates with one of the principal intentions of cure. I would still be understood to speak of it, as existing only in a very moderate degree. But when even more profuse, we are not to check it without premising some purgative. The best remedy in this complaint likewise is

*rhubarb,*

Rhubarb, on account of its astringent quality.

In general, this diarrhoea is to be treated in the same manner with other fluxes of the belly, though it requires the use of aperient and chalybeate medicines more frequently than other cases of that kind. Great caution, however, is requisite in the use of the last of these remedies, when the rickets have continued a long time, and the abdomen is tumid and hard. If such a state of the abdomen is moreover attended with pain, chalybeate medicines ought to be totally proscribed. I have observed the warm dry frictions particularly advantageous in the rachitical diarrhoea.

Profuse sweats, by encreasing the weakness of the body, retard greatly the cure of the rickets. But as this symptom is sometimes attended or preceded

ceded by feverishness, and may in such a case be partly critical, it is not to be rashly checked, no more than the looseness. If the sweats be immoderate, without appearing to be critical, they are generally mitigated by rhubarb. As this symptom, however, is for the most part owing to the universal relaxation of the body, the use of French and Rhenish wines, given in such quantity as not to prove too heating, often produces good effects. And the same may be said of strengthening medicines.

With respect to the difficulty of teething, so common in rickety children, the same palliative method must be used which has been already recommended for that purpose.

The regimen proper in the rickets consists chiefly in motion and exercise, and keeping the child, as much as possible,

sible,

sible, in such a posture as best opposes the tendency which the bones discover to incurvation. In general, those exercises are most beneficial which give the greatest and most equal motion to the body, provided that they are not too violent or long continued. Even too much walking or standing is hurtful to the tender limbs of children, till they have acquired a proper degree of strength. Of all the kinds of exercise, frictions, especially of the back, are remarkably advantageous.

The air ought to be warm and dry, and every thing avoided which tends to obstruct insensible perspiration. On this account, the higher floors of the house are more suitable for the nursery than those that are situated on the ground; and it is also found most advantageous to lay on thin beds, stuffed with the dry leaves of warm and aromatic herbs.

Even



Even chaff-beds are justly reckoned preferable to those made of feathers. Nothing however is more beneficial, either for the cure or prevention of the rickets, than dipping children often in cold water, as has been already recommended.

## C H A P. XX.

*Of the Small Pox.*

**T**HE virulence of this disease, which has long committed such ravages among mankind, is at length almost entirely prevented by the use of inoculation; but as the infection may be received without a due preparation of the body, a knowledge of the history, and proper treatment of the natural Small-Pox is still as necessary as ever in the practice of physic.

This disease has been commonly distinguished into two kinds, the distinct, and the confluent. The disorder is said to be of the former sort, when the pustules are separated by intervening spaces from each other; and of the latter, when they

they are so closely united as to leave no areas betwixt them. The malignity of the disease, however, seems not to depend universally upon the number of pustules; for we sometimes observe it to be of a very bad kind even when they are few and distinct. The constitution of the patient may therefore be considered as the most discriminating circumstance in regard to the virulence or mildness of the disease. But as the progress and symptoms are different in the distinct and confluent kinds, it will be proper to treat of its history according to that division. In performing this task, I shall chiefly adopt the account of Sydenham; from whom indeed, as he has so accurately described the disease, it would be almost impossible, and even erroneous, to deviate.

The distinct kind of small-pox is usually preceded by a rigor, and shivering,  
which

which is followed by an intense heat, a violent pain in the head and back, with a continual reaching or inclination to vomit, and in adults a great propensity to sweat, a sense of pain in the parts opposite to the pit of the stomach when pressed with the hand; a stupor and drowsiness, especially in children, and sometimes convulsions. When this last symptom seizes children that have got their teeth, it is generally a sign that the eruption will appear in a few hours; and the kind of pox which immediately follows these paroxysms, is for the most part very gentle and favourable, and seldom proves confluent. Sometimes this stage of the disease passes over almost insensibly without any remarkable sickness or disorder.

The distinct small pox generally breaks out the fourth day from the first attack, including the first day of the sickness.

Some-



Sometimes the eruption appears a little later, but seldom sooner. After the eruption commences, the symptoms usually abate, and sometimes entirely disappear; though adults retain still a great propensity to sweat, which symptom remains till the pustules have almost arrived at a state of perfect maturation. The eruption begins first on the face, neck, and breast, and then gradually spreads over the whole body. About the time of the eruption the throat becomes painful, and this pain encreases with the size of the pustules. About the eighth day from the seizure the skin between the pustules begins to assume a florid colour, which is attended with a tension and shooting pains; whence in the progress of the disease the eye-lids become so much swelled, that the patient is deprived of sight. After the face, the hands and fingers swell, and become much distended. The pustules upon

the

the face, which before the eighth day were smooth and red, now turn rough and whitish, and there oozes from them a dirty coloured fluid, which concretes into a substance not unlike bees-wax. Those on the hands, on the contrary, and the rest of the body, in proportion as they ripen, become smooth and more white. When the inflammation of the face and hand is arrived at its full height, the spaces between the pustules put on a florid colour, like that of damask-roses, and the milder the small-pox are, the more lively do the pustules and interstices between them, represent the colour above described.

On the eleventh day the swelling of the face and the inflammation disappear; and the pustules over all the body being now ripe, grow dry and fall off; so that by the fourteenth or fifteenth day they are entirely vanished; only the  
pustules

pustules of the hands remain a day or two longer. Through the whole course of the disease, the patient is generally costive.

In the confluent small-pox, all the symptoms before the eruption are more violent than in the distinct; only the patient is not prone to sweat. But sometimes in this kind the eruption is preceded by a diarrhæa, which continues for a day or two after the pustules begin to appear. The eruption begins commonly the third day from the first attack; sometimes before it, but very seldom after; and the sooner the pustules appear, they run more together. It is indeed sometimes, but rarely, observed that the eruption is delayed till the fourth or fifth day, on account of some violent symptom, such as any very acute pain, attended with excessive vomiting and sickness: and wherever these symp-

L

toms

toms are urgent, they portend that the disease will be of the confluent kind, and certainly dangerous.

The symptoms which precede the confluent small-pox continue to molest the patient for many days after the eruption has broke out. The pustules at first, sometimes put on the appearance of an erysipelas, and sometimes of the measles. In their progress they do not rise to any considerable height, like the distinct kind, especially those of the face; but joining close with one another they cover the whole countenance at first as with one red blister, and it is swelled sooner than in the other. They afterwards appear like a white pellicle glued to the face, and rising but very little above the skin. From the eighth day this pellicle grows gradually rougher to the touch, and approaches more and more to a dark brown colour,



colour, till at last it falls off in pretty large portions; which, when the disease is very violent, does not happen in some parts of the face till after the twentieth day.

A salivation constantly attends this kind in adults, and in infants a diarrhæa. The salivation sometimes comes on at the beginning of the eruption, and sometimes not till a day or two after. The discharge at first is thin and copious, as in the mercurial ptyalism, only it has no bad smell; but about the eleventh day becoming more viscid, it is separated from the fauces with great difficulty. The patient complains of thirst, coughs frequently while drinking, and the liquor returns by his nose. After this day the salivation for the most part ceases; but sometimes, though rarely, within a day or two afterwards it returns. The same day the swelling of the face begins

to diminish, and that of the hands to succeed, if the disease advances regularly in its course.

The diarrhæa does not usually begin so soon in children, as the ptyalism in adults; but at whatever time it comes on, unless it be stopped by art, it constantly attends the disease to its period.

Such is the history of the distinct and confluent small-pox, in their regular progress, as related by that accurate observer of nature abovementioned, from whom the account is copied, whose faithful narrative will for ever be admitted to be the most genuine description of this disease. It is now proper to observe that, beside what have already been enumerated, there are some anomalous symptoms, common to both kinds of small-pox, and which may occur in any stage of the disease.

disease. These are purple spots, bloody urine, hæmorrhages, a lethargy, and various internal inflammations. Such symptoms indeed are generally most frequent in the confluent kind of the disease; but in the distinct sort, a suppression of urine sometimes happens, especially in young persons, either when the disease is at the full height, or in its state of declension. A diarrhæa in adults may also be reckoned among the accidental symptoms of the disease, and when it causes the pustules to subside, and diminishes the swelling of the hands and feet, is of dangerous tendency.

The event of the small-pox depends so much upon the constitution and age of the patient, and the state of the symptoms attending the variolous fever, that, if we exclude unfavourable accidents, a pretty certain prognostic may generally be formed at an early period

of the disease; but after the eruption is completed the judgement becomes still more determinate, and the disorder is pronounced to be mild or violent according to the number and disposition of the pustules on the face, without any regard to those on the rest of the body.

In the distinct kind the eighth day, and in the common confluent the eleventh day is the most fatal to the patient. But in worse kinds of the confluent, the fourteenth, the seventeenth, and sometimes, but very seldom, the twenty-first day is most dangerous.

In both kinds of the disease, it is a fatal sign if the swelling of the face and hands does not advance at the regular periods, and continue for the ordinary time; and when, in the confluent kind, the cessation of the prurism is not com-



compensated by these symptoms, especially by a remarkable swelling of the hands, beginning at that time, the death of the patient is inevitable.

When the ptyalism ceases, the patient is also exposed to the danger of suffocation from the tenacity of the saliva; his voice becomes hoarse, and he dies comatose generally the same day.

Purple spots in the interstices of the pustules, are signs of the greatest malignity. Bloody urine, and hæmoptoe portend the utmost danger in every stage of the disease; and if they appear early, they indicate that the small-pox will be confluent, and of the very worst kind, unless the patient dies before the eruption.

The small-pox is so much diversified by the particular constitution of the

patient, that no general method of cure can possibly be successful in all cases. What ought to be chiefly attended to, is the state of the pulse, and the degree of the fever; by the excess or defect of which the patient is equally endangered. If the pulse be full, tense, and rapid; the breathing difficult; the thirst great; the heat sharp, and the urine high coloured; the tongue dry and foul; the pain of the head, back, loins, and limbs, extremely acute; in a concurrence of such violent symptoms, bleeding is absolutely necessary, or the patient may fall a victim to the inflammatory fever, independent of the variolous contagion.

On the contrary, if the disease approaches with a low fever, in which the pulse is weak, quick and tremulous, the countenance pale, the spirits sunk, the urine crude and thin, the heat and  
thirst

thirst inconsiderable, a constant giddiness and heaviness of the head, with other symptoms accompanying a languid state of body; bleeding, in such circumstances, would produce the most fatal effect; as the constitution is already too weak for expelling, and supporting under the disease.

In like manner when the small-pox are attended with a fever of the malignant kind, in which the blood is dissolved, black or livid spots appear, and hæmorrhages ensue, experience has sufficiently evinced the impropriety of bleeding.

We are therefore not to bleed indifferently in all cases where the approach of the small-pox is apprehended; as a moderate degree of fever, where the disease is not exceedingly mild, is absolutely necessary for the expulsion of the

various matter. When bleeding is indicated, it is found highly advantageous to perform the operation in the feet, as it makes a revulsion from the head and breast, which ought to be defended as much as possible from the violence of the disease.

For the same purpose, the method recommended by the judicious Dr. Huxham, of bathing the feet and legs in warm water, or milk and water, for a few minutes two or three times a day, before and at the eruption, is greatly beneficial; as is also the application of emollient cataplasms to the feet.

When, though the fever be sufficiently high, the eruption does not regularly advance, the same sagacious author advises the bathing not only the feet and legs, but the arms and hands, and even the trunk of the body. This method,

method, he informs us, he has practised with success in children whose skin had been rendered more dense than natural by using the cold bath for ricketty disorders,

It sometimes happens that the eruption of the small-pox is retarded by a dejection of spirits, proceeding from an apprehension of a fatal issue of the disease. In such circumstances, though the patient had immediately before been vigorous, he is seized with a sudden debility, and the pulse becomes heavy and oppressed. I have often known this fallacious symptom produce errors in practice, by being unwarily construed into a manifest indication of the impropriety of bleeding, when in fact that evacuation is absolutely necessary for relieving the oppression of the heart, and facilitating the circulation of the blood, without an adequate degree of which



the eruption can never be completed. Nay, it is certain that where great fear or despondency is united with the disease, we ought to assist the vital motions not only by moderate venæsection, but even by cordial medicines. For when the force of the heart is diminished beyond such a degree as is requisite for propelling the blood in the arteries, we can never expect a regular progress of the disease, till the just proportion between the moving powers and the quantity of fluids is restored. In such cases, however, bleeding should never be performed in too great a quantity at once, as the standard of the evacuation can be determined only by its beneficial effects on the pulse, and bleeding may be repeated if requisite; whereas an excess of depletion would prove an irreparable error.

After

After what has been already remarked concerning the different kinds of fevers with which the small-pox may be accompanied, it would be superfluous to add, that in such a weakness of the pulse as depends entirely either on inanition, or a relaxed habit of body and a watry state of the blood, venæsection would be highly injurious. The indication in that case is not to diminish the vital fluid, but to rouse the projectile force of the heart, and excite the oscillatory motion of the vessels, which are then too languid for expelling the variolous eruption. Here, therefore, cordial and warm diaphoretic medicines, with the use of blisters, are necessary; when the protrusion of the pustules is near at hand, a vomit may be advantageously prescribed, instead of the tepid bath, though the patient should not complain of any nausea or load at the stomach. I have so often experienced the

the good effects of an emetic in such a languid state of the variolous fever, that, notwithstanding a puke had been excited at the beginning of the disease, I think proper to advise the repetition of it the third or fourth day from the commencement of the febrile symptoms.

Too general rules have been prescribed by authors for the regimen of the patient during the course of the variolous fever; some recommending a cool, and others a warm method of treatment. But, concerning this point, invariable injunctions can never be salutary or innocent. When the febrile symptoms run high, we ought, with Sydenham, to keep the patient out of bed through the day, till the eruption begins to appear; but if on the contrary the fever be too low, the warmer regimen of Morton, adopted in a degree  
suit-

suitable to the exigence of the case, must be followed. The particular management of the small-pox in the eruptive fever, greatly determines the progress of the disease through all its future stages, and we cannot therefore be too attentive in accommodating the dietetical and medicinal prescriptions to the different indications of this period.

When a vomit is given immediately before the eruption, in the circumstances abovementioned, it ought to be succeeded by emollient cataplasms to the feet, in order to make a derivation from the head, which it is of the greatest importance to preserve as free as possible from the violence of the eruption. For the same reason, if the eruptive fever be attended with a soreness, or great heat of the mouth and throat, and an acrid rheum infects the *membrana Schneideriana*, or larynx, blisters ought to be im-

immediately applied, though, without these indications, or a too languid oscillation of the arteries, the early use of epispastics is unnecessary and less advisable.

When the eruption is completed, a new scene of observation and practice is presented to our view, in which a diligent attention to the progress of the disease is still no less requisite than in the former stage. The appearance and maturation of the pustules become now the great objects of regard, and according as the first of these is laudable, and the last advances regularly, the issue of the distemper will correspond with the most favourable prognostic.

When nature requires assistance for carrying on the maturation of the small-pox, no medicine whatever is more useful than the Peruvian bark. The form  
of



of decoction is that which is generally used; of which one or two spoonfuls, in proportion to the strength of the medicine and the age of the child, is to be given every two or three hours. If the pox be of the small, black, confluent kind, attended with *petechia*, some of the vegetable or mineral acids ought to be given along with the bark. But if, on the other hand, the pustules be of the lymphatic or crystalline sort, where the skin is pale, and the pulse weak, it is necessary to join with the decoction the use of the warmer medicines, such as musk, myrrh, saffron, pulvis contrayerv. comp. confectio cardiaca, &c. The bark, however, ought not to be given where the breathing is difficult, the body costive, and the belly hard and distended, until these symptoms are removed.

If through a natural tendency to a diarrhæa, the bark should be carried off by the intestines, that symptom ought not to be suddenly checked, especially at or near the state of the disease, without premising a dose or two of rhubarb. But if the looseness appears to be the effect of the bark only, a few drops of laudanum may be given with each dose of it, to prevent it being evacuated by that discharge.

Opiates are of great advantage during this stage of the small-pox, both for promoting maturation and abating the pain of the pustules, particularly in the lymphatic or crystalline kind. The same caution, however, is requisite in administering them as the bark, where the disease is attended either with costiveness, or a difficulty of respiration. In general I have found diacodium most useful to children; but if stronger opiates

opiates should be given, we ought to begin with small doses; for we often find the effect of those medicines to be very different in particular persons.

In the lymphatic pox, diuretic medicines, such as nitre, sal succini, and sp. nitri dulcis, are advantageously joined with the warmer alexipharmacs, to promote the discharge of urine, and in this species of the disease, a plentiful diaphoresis is likewise often found useful. For discharging the acrid morbid humours, the large vesications, which in this case are frequently formed by the pustules running together, ought also to be opened with the lancet; otherwise the reabsorption of the acrimonious ichor may prove of pernicious consequence.

The maturation of the pustules is promoted by drinking plentifully of diluting liquids; and as in children the  
small-

small-pox are generally attended with a diarrhæa, the white decoction is commonly used for the purpose. Through the whole course of the disease, however, the belly ought to be kept rather in a laxative than constipated state; and where there is not a natural looseness, an emollient glyster ought to be injected every second, third, or fourth day from the beginning to the decline of the disease. It is particularly to be noted, that if about the sixth or eighth day from the eruption, the body being costive as is usually the case, the patient should be seized with heat, head-ach, sickness and load at the stomach, great restlessness, or stupor, a plain glyster of milk, sugar, and salt, as Huxham observes, seldom fails of giving immediate relief.

The most critical period of the small-pox is that which is called the *state* or *turn*,

turn, and happens on the seventh, ninth, or eleventh day from the eruption. When at this time the swelling of the face sinks suddenly, the pustules become flaccid, and the interstices pale, a fever, attended with alarming symptoms, succeeds. To prevent these effects, the swelling of the hands ought to be immediately solicited by emollient fomentations, cataplasms, and even the use of epispastics. In like manner, it is advisable to make the same applications to the feet, a little before the tumour of these parts should naturally come on, in order to facilitate the salutary translation of the morbid humours. When at this period of the disease, the pulse flags, the patient faints, and the extremities become cold, warm cordial medicines, and blisters, must be immediately prescribed with a liberal hand, or all the terrible symptoms which succeed a premature



mature retrocession of the pustules, will be the inevitable consequence. On the contrary, if at the approach of the secondary fever, the Pulse beats quick, hard, and strong, the breathing be difficult, and the head affected either with an acute pain or phrenzy, bleeding is immediately necessary, as in other inflammatory disorders.

When the incrustation is completed, it is of great advantage to shift the patient into clean linen, and change the putrid air of the room, by cautiously opening the doors and windows. Gentle purgatives are now likewise to be entered upon, by the repetition of which for two or three times, the acrimonious humours which have been produced by the disease are exterminated, and the patient is restored to health.

In this account of the small-pox, I have designedly omitted making any mention of the salivation, as that is a symptom which attends the disease only in adults, and therefore did not properly fall within the compass of this treatise.

## C H A P. XXI.

*Of Inoculation.*

THE practice of inoculation is now deservedly become so universal, that it is proper to deliver a short account of it after that of the natural small-pox. The great advantage attending the artificial method of exciting the disease, is the due preparation of the body, and the observance of proper dietetical injunctions after the infection is received. In respect to the temperament or constitution of the person to be inoculated, the generality of practitioners are now but little scrupulous, paying very small regard to the consideration whether the fluids be tainted with acrimony or not. It is almost universally allowed, that infants under two years of age

age are improper subjects for inoculation; not only as they cannot easily be made to take medicines, but likewise because teething, worms, and convulsions, coinciding with the variolous infection, might hurt the reputation of the practice. From the second, or third year of age, however, inoculation may be safely performed, and, according to the opinion of some, even to the extremity of life. But this is the less adviseable, as the skin of old people becomes hard and impervious, and thereby proves unfavourable both to the absorption of the contagious matter, and the progress of the eruption. Besides, that age is certainly to be preferred, in which the mind is less liable to the agitations of fear and despondency.

The temperate seasons of the year are the fittest for inoculation, though this circumstance is not always regarded.

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It certainly ought not to be performed, however, when epidemic and putrid diseases do prevail, especially where there is reason to apprehend that the infection may be communicated.

In respect to the necessary preparation, the patient is to abstain for eight or ten days from all sorts of flesh and fermented liquors, excepting small beer, in which he may be indulged. The use of spices, aromatics, and whatever heats the blood, ought also to be prohibited. If the person be plethoric, a little blood should be drawn; or if lax, he ought to be corroborated; that the constitution may be brought as near as possible to a perfect state of health, and the circulation be rendered free and easy.

During this course, the powders recommended by Dr. Dimsdale may be

given

I



given three times at proper intervals.  
The following dose is calculated for an  
adult of a strong constitution:

R Pulv. e chelis cancror. comp.

Calomel. præp. ana grana octo

Tartar. emetic. grani octavam  
partem. Misce.

Young children, and, in general,  
all persons who are healthy, require  
less preparation than others, and it is  
sufficient that they begin the use of  
mercury after the infection has been  
communicated.

For conveying the variolous con-  
tagion the method of only raising the  
cuticle, as being the most simple ope-  
ration, and proving equally effectual,  
is certainly preferable to that by in-  
cision. Nor does it appear to be of  
material consequence from what kind

of pox, or what constitution of body the infectious matter is taken, provided that the person inoculated be free from any morbid disposition.

When the patient has been duly prepared, the variolous fever produced by inoculation, is so moderate that through all its progress the disease is seldom or never attended by any dangerous symptoms, and requires no other management than that of a temperate regimen. The drinking of cold water for their thirst, and walking abroad in the open air, without any regard to the season, are the injunctions commonly prescribed. By this method, it is observed, that the fever is suppressed, and the eruption proceeds in the most favourable manner. I have sometimes however known the fever return in an erratic shape, and be accompanied with a fresh eruption; but this rarely happens, and is remedied by gentle

gentle purges and calomel, or, if it should prove more obstinate, by the assistance of the Peruvian bark, which in this case never fails to act as an effectual febrifuge.

After all the success that has been experienced in favour of the cool regimen recommended in the new method of inoculation, it is certain that it may be carried too far; and though the free use of the open air is highly beneficial in a warm season, we cannot reasonably expect that it may be indulged with equal advantage, or even not be prejudicial, in cold weather. A temperate, not a cold regimen, is most conformable to rational principles; and we scarcely can suppose that a process of nature to produce the variolous eruption, which is not carried to an injurious height by an exposure to the heat of the summer solstice, should not incur the danger of being restrained

by the opposite intemperature. From this consideration I have never advised the cool regimen in its fullest latitude, nor have I as yet known any instance where such caution was productive of bad effects.

The next day I found the patient  
 much improved, and the  
 pulse was now moderate and  
 regular. I was therefore  
 obliged to relax the  
 regimen, and to give  
 him a small quantity  
 of wine, and a  
 little of the  
 most delicate  
 food. The  
 patient was  
 now able to  
 walk, and  
 to take  
 his usual  
 exercise.  
 The  
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## C H A P. XXII.

*Of the Measles.*

**T**HE measles are another of the contagious diseases attended with an eruption, and chiefly incident to children. They appear for the most part in the beginning of the spring, and continue to rage till about the middle of summer, when they generally cease for the year.

This disease, like the small-pox, approaches with a rigor and shivering, after which a sense of cold and heat succeed each other alternately for several hours. The second day, the patient labours under a sharp fever, accompanied by want of appetite, violent sickness, vomiting, thirst, heaviness of the



head, a continual inclination to sleep, and a troublesome cough. There is generally a discharge of thin rheum from the nose and eyes, the patient sneezes frequently, and his skin is dry. When infants are seized with this disorder, their stools are usually green, and they have slight spasms, and *subfultus tendinum*.

These symptoms encrease in violence to the fourth day, when for the most part (though sometimes not before the fifth) small red spots, like flea-bites, break out upon the forehead and the rest of the face, gradually increasing in number, magnitude, and redness. To the eye, these spots appear scarcely to be elevated above the skin; but when gently touched with the finger, they may be felt to be a little hard and rough. The fever in the mean time still advances, with the cough, difficulty

of

of breathing, weakness of the eyes, an effusion of tears, and sleepiness.

From the face the spots are gradually diffused over the rest of the body, where they do not, however, rise above the skin, and are perceptible only by their colour.

When the spots have continued two or three days, they become rough and pale, and the cuticle breaks; the desquamation proceeding downward over the body, in the same regular progression with the first appearance of the spots. Nevertheless the cough and difficulty of breathing still remain, nor does the fever entirely cease till a critical diarrhæa supervenes.

In a constitution that is tolerably good, the measles are not dangerous

when they are prudently treated; but in a bad habit of body, or where too warm a regimen has been used in the beginning, the symptoms attending the fever are greatly exasperated; the eruption is protracted; purple, livid, or black spots appear about the height of the disease; the pulse becomes wholly irregular; a great difficulty of respiration ensues; the throat grows painful; a stupor, or delirium supervenes; and the disorder assuming the appearance of a quinsey or peripneumony, the patient is either suffocated or falls into some other disease.

The cure of the measles depends chiefly upon preserving the fever in such a moderate degree as to forward the eruption without increasing the inflammatory symptoms. The use of all kinds of flesh must be prohibited, and the diet

diet consist entirely of barley broth, panada, and the like. For drink, milk and water, or honey and water, with the addition of a little nitre if the fever runs high, are the most suitable, and they ought always to be given warm, on account of the tendency in this disease to an inflammation of the throat and lungs.

For mitigating the cough, and difficulty of breathing, which are generally so troublesome in the measles, it is necessary to prescribe mild, demulcent medicines, and opiates, especially at night, through the whole disease. The pectoral linctuses and diacodium are the best adapted for this purpose.

If the spots should suddenly become pale, or disappear, and this retrocession be followed by an increase of the fever, attended with great difficulty of respi-

ration, and a delirium, blisters and acrid cataplasms ought to be immediately applied; and, if the pulse be strong, blood must be also drawn, without delay.

It is not uncommon for a cough to continue a week or two after the measles have disappeared; but when that happens, it is generally cured without much difficulty by the use of pectoral medicines, and a free air.

If the desquamation of the measles be succeeded by a fever, a difficulty of breathing, and the other symptoms of a peripneumony, we must again have recourse to blood-letting, performed in such a quantity and repeated as occasion requires.

When the symptoms admit, a purge ought to be given about the twelfth day from



from the beginning of the disease, and repeated once or twice, to cleanse the habit of body; for nothing is more pernicious than to allow the relics of this disorder to remain.

## C H A P. XXIII.

*Of the Hydrocephalus Internus.*

THE Hydrocephalus Internus is a disorder arising from a preternatural collection of serum in the ventricles of the brain; and of all with which we are acquainted is both the most obscure in its origin, and fatal in its effects. It is so much confined to the earlier stages of life that it has seldom been observed in any person who had attained the age of puberty. It appears, however, not to be chiefly incidental to any particular constitution; for we find that the most healthy and vigorous children are as much liable to it as others. From which circumstance there is reason to conclude, that it is rather the consequence of the rupture of a lymphatic vessel

vessel in the brain, than of any defect of absorption.

The first symptoms of this disorder are similar to those which are observed to attend an irritation of the brain, or *primæ viæ*; and they resemble so much the effects of worms as to be often ascribed, at the beginning, entirely to that cause.

The sign by which the earliest stage of this disease is generally accompanied, is a pain in some part below the head, for the most part about the nape of the neck and shoulders, frequently in the legs, and sometimes, though rarely, in the arms. The seat of the pain, however, is extremely variable; sometimes entirely affecting the head, and at other times appearing in the form of a sickness at the stomach. In the space of a week, or little more, the disorder be-  
comes

comes obviously more fixed, producing an acute pain, deep seated, and extending across the forehead. At the first seizure, the pulse is quicker than natural, and the patient feels feverish heats, especially towards the evening. The head and præcordia are usually hot from the commencement of the disease, the patient is averse to light, and is uneasy in any other posture than that of lying horizontally. In the middle stage of the disorder, the pulse becomes irregular, and diminishes greatly in velocity; but as the fatal catastrophe near approaches, it assumes a greater quickness than ever; the heat is both more general and excessive; and the respiration becomes irregular and laborious. The pupils of the eyes, which had for some time been remarkably dilated, grow at last paralytic and immoveable, and the termination of the tragedy soon ensues.

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Through the whole disorder the patient is extremely costive, and the stools are usually of a dark greenish colour. When asleep, great part of the whites of the eyes are visible to a spectator, and, when awake, the child frequently screams out.

From the ambiguous symptoms which attend the earlier stage of this disease, it is scarcely to be distinguished from the disorders occasioned by worms; and therefore anthelmintic medicines are generally first prescribed. But whether it be owing to the fallaciousness of the disease, or that the physician is not called before the patient's case be irremediable, most certain it is, that we have few or no authentic histories of a perfect cure in this disorder. The method which ought to be pursued for that purpose, however, is undoubtedly more obvious than successful. The sickness at the stomach,



stomach, and the excessive costiveness plainly indicate that the *prime via* should be cleansed; while the dropical nature of the disorder suggests the expediency of encreasing the serous discharges; and the irritation from whence many of the symptoms appear to arise, affords room for expecting some benefit from the use of the cooler antispasmodic medicines. But I shall insist no farther upon the cure of a disease of which we know so little by experience. The history of the Hydrocephalus Internus is scarce of any more advantage in the practice of physic at present, than as it teaches us to distinguish the disease, and prognosticate the fatal event.

THE END.

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